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Assessing the Health-Related Service Needs of People Living With Human Immunodeficiency Virus: A Review of Ryan White Title II Needs Assessments

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ASSESSING THE HEALTH-RELATED SERVICE NEEDS OF PEOPLE LIVING WITH HUMAN IMMUNODEFICIENCY VIRUS: A REVIEW OF RYAN WHITE TITLE II NEEDS ASSESSMENTS

by

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ABSTRACT

Assessing the Health-Related Service Needs of People Living With Human Immunodeficiency Virus: A Review of Ryan White Title II Needs Assessments

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The Health Resources and Services Administration (HRSA) allocated $940 million in 2002, through Title II of the Ryan White Comprehensive AIDS Resources Emergency (CARE) Act, to help states improve the quality and availability of health-related services for people living with HIV/AIDS. These resources are allocated based upon recommendations made by community planning committees, which in turn base their recommendations on HIV/AIDS needs assessments. A methodologically sound, comprehensive needs assessment is a critical component of effective resource allocation decisions. Poor needs assessments might lead to poor resource allocation decisions, which might have life-threatening consequences for people living with HIV/AIDS. Little is known about the quality of Ryan White Title II (RWTII) needs assessments. This dissertation identifies seven elements of a high quality needs assessment, which might serve as an assessment tool for funding agencies and as a guidance tool for grantees. The

author uses the seven elements in a review of RWTII needs assessments to provide evidence pertaining to the current level of quality of RWTII needs assessments. The seven elements are then applied in a case study of improved practice to demonstrate how to adequately apply the key elements of a high quality needs assessment.

(206 pages)

DEDICATION

For Windy, Caitlin, and Brittany

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Ryan K. Loo

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CHAPTER I

INTRODUCTION

The human immunodeficiency virus (HIV), which causes acquired immunodeficiency syndrome (AIDS), continues to have a substantial impact on humankind. The virus is considered to be an epidemic due to its rapid expansion through the human population. The Centers for Disease Control and Prevention (CDC) has estimated that there are 800,000 to 900,000 people living with HIV (PLWH) in the United States and approximately 40,000 new HIV infections occur in the US every year. The CDC reported a total of 774,467 AIDS cases and over 448,060 AIDS deaths in the US from the beginning of the epidemic in 1980 to December 2000. There are also more people living with HIV/AIDS (PLWH/A) in the US than ever before due to better treatment for HIV/AIDS. For example, the number of people living with AIDS (PLWA) increased 9.2% ($N = 25,320$) from 1998 to 1999 and increased 7.6% ($N = 22,921$) from 1999 to 2000 (CDC, n.d.).

HIV compromises the immune system and weakens the body's natural defenses. As a result, PLWH/A experience a wide range of health and financial challenges. The health and financial challenges result in increased levels of need for a variety of health-related services. The growing HIV/AIDS population and the elevated level of need experienced by this population represents a continually rising public health concern. The Federal Government provides some support for PLWH/A through the Ryan White Comprehensive AIDS Resource Emergency (CARE) Act. Ryan White Title II (RWTII) programs provide valuable resources to PLWH/A, primarily through outpatient primary

medical care. RWTII programs strive to assist PLWH/A in maintaining their health as long as possible.

In keeping with the guidelines in the CARE Act, RWTII programs allocate resources based on recommendations made by local planning committees. Planning committees generate their recommendations through a process called community planning. Community planning is a critical component in resource allocation because it provides consumers of services and other interested community members an opportunity to voice their opinion and potentially influence resource allocation. The planning committee prioritizes services and recommends proportions of funding for each health-related service category.

One of the most important data sources used in the community planning process is a needs assessment. A needs assessment in this context is a process of gathering and analyzing information from a variety of sources in order to determine the current status of need (Health Resources and Services Administration [HRSA], 2002a, 2002b). This definition is further developed in the review of literature. A needs assessment should provide the best possible description of health-related service needs because of the integral part it plays in the community planning and resource allocation process. Poor needs assessment data have the potential to have far-reaching detrimental effects on PLWH/A. Failure to accurately identify the services required and the resources available might result in PLWH/A going without primary medical care, life-extending drug treatments, or other important health-related services.

Needs assessments are a vital part of the resource allocation decisions that result in the distribution of millions of dollars in HIV-related resources every year. It is

important to establish and maintain protocols that could improve the quality of RWTII needs assessments in the interest of potentially improving the effectiveness of HIV-related resource allocation decisions. The problem is that little is known about the quality of RWTII needs assessments. This problem should be addressed in an effort to minimize the potentially harmful effects of poor needs assessments.

There are three primary goals in this dissertation. The first goal is to establish the key elements of a high quality needs assessment within the framework of the four attributes of a sound evaluation. This is an important contribution in that the key elements might serve as a guidance tool for needs assessors or as an assessment tool for funding agencies. The second goal of this dissertation is to use the key elements of a high quality needs assessment to review the quality of a sample of recently completed RWTII needs assessments. If there are potential shortfalls on key elements in existing RWTII needs assessments, it is important to identify them so that RWTII programs might improve the quality of their needs assessment data. The third goal of this dissertation is to demonstrate the application of the key elements of a high quality needs assessment. The needs assessment conducted in part by the Utah HIV/AIDS Treatment and Care Program, under the Utah Department of Health's (UDOH) Bureau of Communicable Disease Control, will be used as a case example. The Utah HIV/AIDS Treatment and Care Program is the RWTII program in Utah.

CHAPTER II

REVIEW OF LITERATURE

Assumptions Associated with the PLWH/A Abbreviation

The author recognizes the common assumptions associated with referring to PLWH/A populations and adheres to these assumptions throughout this dissertation. One assumption is that the distinction between people living with HIV (PLWH) and people living with AIDS (PLWA) is indicated when necessary. Another major assumption is that the PLWH/A abbreviation refers to the PLWH/A-aware population, unless otherwise indicated. An explanation of these assumptions is provided in the following paragraphs.

PLWH are individuals who have been infected with HIV but have not been diagnosed with AIDS. AIDS is a condition that is diagnosed through a CD4 count. CD4 cells are cells in the immune system that are primarily targeted by HIV. Individuals who are HIV positive, which means they are infected with HIV, are diagnosed with AIDS when their CD4 count drops below 200. A person with AIDS still has HIV and an AIDS diagnosis simply reflects the degree to which HIV has affected a person's immune system (HRSA, 2002b). PLWA are individuals who have been infected with HIV and they have also been diagnosed with AIDS. A person must become infected with HIV before that person can progress to AIDS (UDOH, 2002b). PLWH and PLWA are usually referred to as PLWH/A because the distinction between the two groups is typically not required in most situations (Beinecke, Matava, Rivers, & Awunti, 2004; Burris, 2002; Cunningham et al., 1995; Hawaii CARES Needs Assessment Committee, 2001; Kass et al., 1994; Kentucky School of Public Health, 2002; Michigan Department of Community

Health, 2003; Montoya, Richard, Bell, & Atkinson, 1997; Partnership for Community Health, 1999, 2002; The Research Partnership, 2002; Tulane University School of Public Health and Tropical Medicine, 2002; UDOH, 2002a; Vermont Department of Health, 1996; Williams, Stern, & Associates, 2002; Wisconsin Department of Health and Family Services, 2000). Referring to the two populations as a single population is customary unless a distinction is required (CDC, n.d.; UDOH, 2002b, 2004a).

Technically, the PLWH/A population can be broken down into two subpopulations: (a) PLWH/A-aware, and (b) PLWH/A-not aware. The PLWH and PLWA populations can also be broken down into "aware" and "not aware" populations. PLWH/A-aware are individuals who have HIV/AIDS and are aware of their HIV status. Awareness of their HIV status means that they know that they have HIV/AIDS. PLWH/A-not aware are individuals who have HIV/AIDS but they do not know that they have HIV/AIDS (HRSA, 2002a, 2002b).

HIV/AIDS research centers primarily around PLWH/A-aware because people need to know that they are HIV positive in order to consider themselves part of the PLWH/A population. For example, an HIV/AIDS researcher can only assess the health-related service needs of PLWH/A-aware because people need to know they have HIV/AIDS in order to have health-related service needs pertaining to that condition. As a result, PLWH/A-aware are the only members of the PLWH/A population that can actually be contacted. PLWH/A-not aware exist, but it is impossible to contact or assess them as members of the PLWH/A population. For these reasons, the standard assumption is that a researcher is referring to active PLWH/A-aware cases when the PLWH/A reference is used (Beinecke et al., 2004; Burris, 2002; Cunningham et al., 1995;

Hawaii CARES Needs Assessment Committee, 2001; Kass et al., 1994; Kentucky School of Public Health, 2002; Michigan Department of Community Health, 2003; Montoya et al., 1997; Partnership for Community Health, 1999, 2002; The Research Partnership, 2002; Tulane University School of Public Health and Tropical Medicine, 2002; UDOH, 2002a; Vermont Department of Health, 1996; Williams et al., 2002; Wisconsin Department of Health and Family Services, 2000). Referring to the population as "aware" or "not aware" is not necessary unless a distinction between these groups is required (HRSA, 2002a, 2002b; UDOH, 2002b, 2004a).

Rising Public Health Concern

This section provides evidence bearing on the health and financial challenges faced by PLWH/A. The growing PLWH/A population is also described. The elevated level of need for health-related services combined with the growing PLWH/A population represents a continually rising public health concern.

Health-Related Service Needs of PLWH/A

HIV weakens the immune system and increases its vulnerability to opportunistic infections. Increased health challenges related to HIV/AIDS result in an increased frequency of medical visits (Montoya et al., 1997), loss of employment and insurance benefits (Kass et al., 1994), and difficulty meeting health-related service expenses (Cunningham et al., 1995). Several studies have shown that PLWH/A have high levels of need for a wide range of health-related services including primary medical care (Great Lakes to Tennessee Valley AIDS Education and Training Center, 1999; Kentucky School

of Public Health, 2002), dental care (Alaska Department of Health and Social Services, 1998; Marx, Katz, Park, & Gurley, 1997), help paying for HIV/AIDS related medications and drug therapies (Alaska Department of Health and Social Services; Partnership for Community Health, 1999), help with the continuation of health insurance coverage (Missouri Department of Health, 1999; Partnership for Community Health), transportation services (HIV Prevention Community Planning Group, 2000; Kryder-Coe, Wenocur, & Brown-Felser, 2001), help with housing (Lin & Melchiono, 1998; The Research Partnership, 2002), food services (Kentucky School of Public Health, 2002; The Research Partnership), and mental health services (Marx et al.). It is widely accepted and evident throughout the literature that PLWH/A have increased needs for health-related services.

The HIV Epidemic

HIV is considered to be an epidemic due to its rapid expansion through the human population. The CDC estimates there are approximately 40,000 new HIV infections in the US every year and there are approximately 800,000 to 900,000 people in the US that are living with HIV. There have been 774,467 AIDS cases and over 448,060 AIDS deaths in the US from the beginning of the epidemic in 1980 to December 2000. There are also more PLWH/A in the US than ever before due to better treatment for HIV/AIDS. For example, the number of PLWA increased 9.2% ($N = 25,320$) from 1998 to 1999 and increased 7.6% ($N = 22,921$) from 1999 to 2000 (CDC, n.d.).

The trends observed in the PLWH/A population in Utah, which is the population treated by the RWTII program case example in this dissertation, are similar to the trends

reported by the CDC. Through December 2003, a cumulative total of 2,203 AIDS cases and an additional 714 persons infected with HIV have been reported in Utah. A cumulative total of 1,095 diagnosed AIDS cases and 19 HIV cases have died. There are approximately 1,108 PLWA and an additional 695 PLWH in Utah, as of December 2003. It is estimated that there is an additional 700 to 1,600 PLWH/A who have not been diagnosed. There were 101 HIV cases reported in 2003, which is a 55% increase from the 65 cases reported in 2002. There were 72 AIDS cases reported in 2003, which is a 3% increase from the 70 cases reported in 2002 (UDOH, 2004a).

The increased level of need for health-related services combined with the rapidly growing HIV/AIDS population signify a continually rising public health concern. Increased levels of need and an increasing number of PLWH/A who have those needs translate into a need for more resources to adequately address the needs of this growing population. PLWH/A are also living longer due to advancements in HIV/AIDS medications, which contributes to the increasing number of PLWH/A with health-related service needs (CDC, n.d.). The Federal Government's response to this rising public health concern is presented in the next section.

Federal Support for HIV/AIDS

This section describes federal spending on HIV/AIDS and the federal programs that receive HIV/AIDS funding. A review of the background and purpose of the Ryan White CARE Act is also presented. The RWTII program in Utah, which is the case example used in this dissertation, is introduced at the end of this section.

Federal Spending on HIV/AIDS

The Federal Government spent a total of $13.9 billion on HIV/AIDS during the 2001 fiscal year. This federal spending can be broken down into four major categories: (a) $10 billion (72.3%) on HIV/AIDS care and assistance, (b) $2.3 billion (16.8%) on HIV/AIDS research, (c) $918 million (6.6%) on HIV prevention, and (d) $585 million (4.2%) on international HIV/AIDS spending. As just noted, the majority (72.3%) of federal HIV/AIDS funding is spent on care and assistance, which is concerned with providing health-related services to PLWH/A. Various federal programs utilize the care and assistance funds including Medicaid ($3.7 billion, 36.8%), Medicare ($1.9 billion, 18.9%), Ryan White CARE Act Programs ($1.8 billion, 18.0%), Social Security Disability Insurance ($912 million, 9.1%), and five other categories of programs that each receive 6% or less of the total funding (Foster, Niederhausen, & Westmoreland, 2002).

Ryan White CARE Act Programs are the focus of this dissertation due to the size and scope of the CARE Act. Another reason is that all RWTII programs are required to conduct needs assessments and engage in the community planning process, which will be explained later. These requirements, however, are not as extensive in the Medicaid, Medicare, or Social Security Disability Insurance Programs.

Ryan White CARE Act

Congress passed the Ryan White CARE Act in 1990 in response to the HIV epidemic. The primary goal of the CARE Act was to improve the quality and availability of health care and support services for PLWH/A (Marx et al., 1997; McKinney, Wieland,

Bowen, Goosby, & Marconi, 1993). Approximately half (50.4%, $911 million) of total Ryan White funding ($1.8 billion) was spent on Title II programs during the fiscal year 2001 (HRSA, 2004a), and over $940 million was spent on Title II Programs in fiscal year 2002 (HRSA, 2004c). Title II of the CARE Act directs that grants be awarded to states to help them improve the quality and availability of health-related services for PLWH/A (HRSA, 2002b; Loue, Faust, & O'Shea, 2000; McKinney et al., 1993). The CARE Act funds 59 Title II grantees, which include all 50 states in the US, the District of Columbia, Guam, Puerto Rico, Northern Mariana Islands, Micronesia, Territory of America Samoa, Republic of Palau, Marshal Islands, and the Virgin Islands (HRSA, 2004b).

Ryan White CARE Act programs uniquely contribute to HIV/AIDS care and assistance in that they fill the gaps not covered by other sources of care and assistance (HRSA, 2002b; Marx et al., 1997; McKinney et al., 1993). Ryan White programs are often referred to as the "payers of last resort." Ryan White programs assist PLWH/A who are poor and have not received health-related services, to obtain the services that help maintain their health as long as possible. Ryan White programs also help PLWH/A who are already receiving services continue to receive vital services when their needs exceed the limits of other care and assistance programs. This is particularly important when considering life-extending drug treatments and outpatient primary medical care. CARE Act funds can be used to help pay for health insurance coverage, HIV/AIDS medications and drug therapies, home-based and community-based care services, and to ensure the continuum of medical and support services (Loue et al., 2000; McKinney et al., 1993). Support services covered by the CARE Act include case management,

transportation, housing assistance, and nutritional services (Buchanan & Chakravorty, 1999).

The HIV/AIDS Treatment and Care Program, under the UDOH Bureau of Communicable Disease Control, is the RWTII program in the State of Utah. This RWTII program is the case example used in the Results Section of this dissertation. The HIV/AIDS Treatment and Care Program was awarded $2.7 million as a CARE Act grantee in the 2001 fiscal year (HRSA, 2004c).

Community Planning and Resource Allocation

The purpose and scope of the community planning process is introduced in this section. The definition of a needs assessment is also presented. This section concludes with a description of the resource allocation process and the critical role needs assessments play in that process.

Community Planning

In keeping with the guidelines in the CARE Act, RWTII programs allocate resources based on recommendations made by planning committees. An HIV/AIDS planning committee consists of HIV-positive consumers, advocates for the HIV community, and health professionals from public and private organizations. Planning committees generate their resource allocation recommendations through a process called community planning. The community planning process provides consumers of services and other interested community members an opportunity to voice their opinion and potentially influence resource allocation. Planning committee members review various

sources of information that are related to the needs of the PLWH/A community. The planning committee prioritizes health-related services and recommends proportions of funding for each health-related service category. These recommendations are based primarily on needs assessments (HRSA, 2002b). Policymakers allocate funds after reviewing information related to need along with the recommendations made by the planning committee (Kahn, Brandeau, & Dunn-Mortimer, 1998).

The Utah HIV/AIDS Treatment and Care Program allocates CARE Act resources based on the recommendations made by the Utah HIV/AIDS Treatment and Care Planning Committee. The planning committee's recommendations are generated in the community planning process, which is consistent with the requirements of the CARE Act. Community planning in Utah involves consumers of services and other interested community members in group discussions and examination of health-related service needs data. The planning committee prioritizes health-related services and provides recommendations on the proportion of CARE Act resources that should be allocated to each service category (UDOH, 2003).

A needs assessment should provide the best possible description of health-related service needs due to the integral part it plays in the community planning and resource allocation process. Poor needs assessment data have the potential to have far-reaching detrimental effects on PLWH/A, such as failure to receive primary medical care, life-extending drug treatments, or other important health-related services. Providing high quality and credible needs assessments to community planning members should be a top priority in an effort to improve the efficiency and effectiveness of resource allocation decisions.

Definition of a Needs Assessment

Needs assessments have been used for decades as an information source for resource allocation. Public health programs under Title V of the Social Security Act have been required to conduct needs assessments to inform the development of strategies to achieve public health objectives since 1935 (US Congress, 1935). Federal, state, and local public health agencies have historically used needs assessments as the foundation for the development of intervention strategies and allocation of resources (Petersen & Alexander, 2001). Nevertheless, there is not a uniform definition of a needs assessment despite the fact that needs assessments have been used extensively for many years (Reviere, Berkowitz, Carter, & Fergusen, 1996).

The term "needs assessment" can be defined in many ways because there are many types of needs assessments conducted for a variety of purposes (Soriano, 1995; Witkin & Altschuld, 1995). Witkin and Altschuld broadly define a needs assessment as a systematic set of procedures used to inform priority setting, program improvement, and resource allocation. HRSA (2002a, 2002b) broadly defines a needs assessment as a process of collecting information on the number of HIV/AIDS cases, the needs of PLWH/A, and the current resources available to meet those needs. The focus of this dissertation is what HRSA refers to as the "needs of PLWH/A" portion of a needs assessment. The definition of a needs assessment in this dissertation excludes the "number of HIV/AIDS cases" and the "current resources available to meet those needs" because these topics are traditionally covered in an epidemiological profile and a resource inventory. The author of this dissertation considers an epidemiological profile, a needs

assessment, and a resource inventory as three separate data sources that are reviewed during the community planning process. This definition is supported by Kaufman (1988, 1992) and Witkin and Altschuld in that they both define the primary purpose of a needs assessment as the process of determining the current state of affairs, not "how many" or "what is available."

Needs assessors throughout the literature make the distinction between primary level, secondary level, and tertiary level needs (Altschuld & Witkin, 2000; Berkowitz, 1996; Petersen & Alexander, 2001; Witkin, 1984, 1994; Witkin & Altschuld, 1995). Primary level needs are the needs of direct recipients of service. Secondary needs are the needs of the service providers that serve primary level recipients. Tertiary needs are the resource needs of the secondary level providers. Researchers have suggested that most needs assessments are conducted at the secondary and tertiary levels (see Witkin, 1994 for review of literature), which should not be the case if the goal of the needs assessment is to identify client level needs. Needs assessments should be conducted largely at the primary level if the client needs are a high priority (Altschuld & Witkin). The purpose of a RWTII needs assessment is to educate and inform the community planning process. A community planning committee's main objective is to identify the client level needs of PLWH/A so that accurate service prioritization recommendations might be made (HRSA, 2002a, 2002b). In this case, a RWTII needs assessment should focus on the primary level needs of recipients of service.

In summary, for the purpose of this dissertation a RWTII needs assessment will be defined as a process of collecting primary level information (Altschuld & Witkin, 2000; Berkowitz, 1996; Petersen & Alexander, 2001; Witkin, 1984, 1994; Witkin &

Altschuld, 1995) on the health-related service needs of PLWH/A within the RWTII program's jurisdiction (HRSA, 2002a; 2002b). This definition implies that the primary purpose of a RWTII needs assessment is to determine the current state of need (Kaufman, 1988, 1992; Witkin & Altschuld). A RWTII needs assessment is a descriptive study, based on the definition used in this dissertation.

Resource Allocation

RWTII programs have the potential to improve the quality and availability of health-related services for PLWH/A if planning committee recommendations result in effective resource allocation decisions. A methodologically sound, comprehensive needs assessment is a critical component of effective resource allocation decisions (Bradford, Honnold, Rives, & Hafford, 2000; HRSA, 2002a, 2002b; Kahn et al., 1998; McKinney et al., 1993). High quality needs assessments contribute to good resource allocation decisions and poor needs assessments might lead to poor resource allocation decisions. If a needs assessment does not accurately represent the needs of a PLWH/A population, planning committees might not be able to accurately identify health-related service needs. This misinformation may result in less effective allocation of resources, which in turn might result in far-reaching and potentially harmful consequences on PLWH/A such as an inability to obtain life-extending drug treatments, medications, or health care services.

It is imperative that planning committees understand the quality of RWTII needs assessments in order to make the best possible resource allocation decisions. While this notion might be important, the criteria for determining the quality of RWTII needs assessments have not been established. The following sections identify the seven

elements of a high quality needs assessment, as part of a systematic review of RWTII needs assessments. The seven elements are then used in the concluding section of this literature review to demonstrate the current level of quality of RWTII needs assessments.

Seven Elements of a High Quality Needs Assessment

Evidence bearing on the first goal of this dissertation is presented in this section. The seven elements of high quality needs assessments are defined within the framework of the four attributes of sound evaluations. A detailed description of each of the elements is also provided.

The Four Attributes of Sound Evaluations

The attributes and the standards. The Joint Committee on Standards for Education Evaluation (Joint Committee, 1994) distilled the four attributes of sound evaluations as part of an effort to establish standards for educational evaluation practice. The purpose was to develop standards that would contribute to useful, ethical, and sound evaluations. The Joint Committee consisted of members representing 15 professional associations including the American Association of School Administrators, the American Educational Research Association, the American Evaluation Association, the American Federation of Teachers, the American Psychological Association, the Association for Assessment in Counseling, the Association for Supervision and Curriculum Development, the Canadian Society for the Study of Education, the Council of Chief State School Officers, the Council on Postsecondary Accreditation, the National Association of Elementary School Principals, the National Association of Secondary

School Principals, the National Council on Measurement in Education, the National Education Association, and the National School Boards Association. The American National Standards Institute approved the standards in 1994 and the standards are recognized throughout various disciplines as a guide to sound evaluation practice.

The Joint Committee categorizes the standards into four attributes of sound evaluations: (a) utility, (b) feasibility, (c) propriety, and (d) accuracy. The four attributes provide a framework for the elements of high quality needs assessments that are established later in this dissertation. The standards are not equally applicable in all contexts (Joint Committee, 1994) and the author of this dissertation claims that the individual contribution of each standard does not outplace the overarching purpose of the attribute of which it is a part. The goal of the attribute is what is important, not the individual standards themselves. The standards are guiding principles meant to help guide evaluators toward accomplishing the goals of the four attributes of sound evaluations (Joint Committee). The goals of the four attributes are presented in the next section.

The goals of the four attributes. The utility attribute focuses on the influence and timeliness of the evaluation. Standards pertaining to this attribute require evaluators to familiarize themselves with their audience, identify their information needs, respond to these needs, and disseminate relevant information in a clear and timely manner. The overall goal of the utility attribute is to ensure that the evaluator meets the information needs of the audience (Joint Committee, 1994).

The feasibility attribute recognizes that evaluations are usually conducted in field settings as opposed to laboratory settings. Evaluations in field settings can consume vast

amounts of resources due in part to the lack of a controlled environment. The standards pertaining to this attribute require evaluators to be prudent, realistic, and economical. Evaluations should not consume more time, resources, personnel, or material than necessary (Joint Committee, 1994).

The propriety attribute recognizes the importance of ethical evaluations. The rights of the individual participants should be protected. The standards pertaining to this attribute require evaluators to understand and observe laws related to the protection of human subjects, freedom of information, and privacy (Joint Committee, 1994).

The accuracy attribute focuses on whether an evaluation produces accurate information. The standards pertaining to this attribute require an evaluator to collect technically adequate data and inferences must be logically linked to the data. Issues pertaining to reliability, validity, defensible information sources, documentation of procedures, sound analysis, and justified conclusions are key components of this attribute (Joint Committee, 1994).

The four attributes and the elements of a high quality needs assessment. The Joint Committee (1994) recommends that evaluators should use and improve the attributes as part of an effort to advance the field of evaluation. The elements of high quality needs assessments are a potential contribution to the refinement of the attributes even though the attributes were developed for the field of evaluation. The Joint Committee supports the use and improvement of the attributes in fields outside of evaluation if relevant attributes are applied in accordance with the professional judgment of researchers.

The elements of high quality needs assessments touch on all four attributes of a sound evaluation, but the accuracy attribute is emphasized in the context of this dissertation. A primary concern presented in the problem statement was that the community planning process might generate inaccurate resource allocation recommendations based on poor needs assessment data. The underlying premise of this dissertation is that the elements need to be implemented correctly so that they might enhance the accuracy of the results generated for community planning, which, in turn, might improve the accuracy of resource allocation decisions. The author primarily refers to contributions to the accuracy attribute throughout this dissertation, but contributions to the other attributes are also identified.

Seven Elements of a High Quality Needs Assessment

A convenience sample of references from educational research (Gall, Gall, & Borg, 2003), research methods for psychology (Graziano & Raulin, 2000), industrial/organizational psychology (Muchinsky, 2000), program evaluation (Weiss, 1998), and needs assessments (HRSA, 2002a; Soriano, 1995; Witkin & Altschuld, 1995) were reviewed in an effort to identify the common elements in a high quality needs assessment. Some of the references identified common elements in high quality needs assessments (HRSA; Soriano; Witkin & Altschuld) and others identified common elements in high quality descriptive studies (Gall et al.; Graziano & Raulin; Muchinsky; Weiss). The common elements of high quality descriptive studies can inform the elements of high quality needs assessments because the definition of a needs assessment in this dissertation characterizes a needs assessment as a descriptive study.

The results from the review of literature are presented in Table 1. Seven elements of a high quality needs assessment were identified based on the common elements presented in the literature. Each element is listed in the first column followed by check marks in each row indicating which references recommended the respective element. The last column is the total number of references that recommended the particular element. The elements are listed in the order that they are presented in this dissertation.

It is important to note that a missing check mark (see Table 1) does not necessarily mean that the authors of a particular reference do not support the particular element. For example, Witkin and Altschuld (1995) probably support the "methods that allow reasonable replication" element but they did not directly address this element in their book. It is reasonable to assume that all of the authors referenced in Table 1 would probably support each of the elements presented, however, the author of this dissertation could only cite elements that were explicitly addressed in the references.

The seven elements of a high quality needs assessment found in the reviewed literature are: (a) appropriate data collection methods, (b) representative sample, (c) reliability assessment, (d) validity assessment, (e) combination of qualitative and quantitative methods, (f) comprehensive assessment, and (g) methods that allow reasonable replication. The author does not imply rank or importance by the order in which the elements are presented in this dissertation. While some elements might be more important than others, the author does not address differences in importance because contextual factors can have an impact on the value of any particular element.

Table 1

Seven Elements of a High Quality Needs Assessment

	References							
Element	A	B	C	D	E	F	G	Total
Appropriate data collection methods	Y	Y		Y	Y	Y	Y	6
Representative sample	Y	Y	Y	Y	Y	Y	Y	7
Reliability assessment	Y	Y	Y	Y	Y	Y	Y	7
Validity assessment	Y	Y	Y	Y	Y	Y	Y	7
Combination of qualitative and quantitative methods				Y	Y	Y	Y	4
Comprehensive assessment					Y	Y	Y	3
Methods that allow reasonable replication	Y	Y						2

Note. The references are: (a) Gall et al., 2003; (b) Graziano & Raulin, 2000; (c) Muchinsky, 2000; (d) Weiss, 1998; (e) HRSA, 2002a; (f) Soriano, 1995; and (g) Witkin & Altschuld, 1995. A check mark indicates that the authors directly addressed a particular element. A missing check mark does not necessarily mean that the authors do not support a particular element.

Appropriate Data Collection Methods

Strategy for selecting methods. The "appropriate data collection methods" element refers to the suitability of the data collection methods used in a study. Specific procedures for selecting methods were not described in the literature, but there were general guidelines that a researcher should consider when selecting methods. These

guidelines are described later in this section as part of the criteria for selecting appropriate methods. The author of this dissertation used a two-step strategy, which consisted of identifying the range of methods that are suitable for a RWTII needs assessment and establishing criteria for selecting appropriate methods.

A RWTII needs assessment is a descriptive study based on the needs assessment definition used in this dissertation. The author reviewed literature to identify the range of appropriate methods for a needs assessment characterized as a descriptive study (Gall et al., 2003; Graziano & Raulin, 2000; HRSA, 2002a; Muchinsky, 2000; Soriano, 1995; Weiss, 1998; Witkin & Altschuld, 1995). The references used in this review are the same references that were used to establish the seven elements of a high quality needs assessment. The results are presented in Table 2.

The author identified eleven methods that were recommended for descriptive studies similar to RWTII needs assessments. The first seven columns identify the references that recommended the method and the eighth column is the total number of references that recommended the method. The name of each method is followed by a brief description of what the method entails. The methods are listed in alphabetical order.

The author also established five criteria for selecting appropriate methods as part of the literature review in Table 2 (Gall et al., 2003; Graziano & Raulin, 2000; HRSA, 2002a; Muchinsky, 2000; Soriano, 1995; Weiss, 1998; Witkin & Altschuld, 1995). The five criteria are: (a) consider the characteristics of the target group, (b) consider the geographic area over which the population is spread, (c) consider the purpose of the

Table 2

Common Methods Used in Descriptive Studies

References									
A	B	C	D	E	F	G	Total	Data collection method	Description
Y	Y	Y	Y	Y	Y	Y	7	Archival research	Reanalysis and/or studying information from existing databases.
Y	Y	Y	Y				4	Case study	A substantial amount of information is collected about a specific case (or cases).
Y	Y	Y	Y	Y	Y	Y	7	Group processes	Small groups are brought together and the researcher raises topics for discussion. This category of methods includes group interviews and focus groups.
Y	Y	Y	Y	Y	Y	Y	7	Interviews (formal/informal)	The interviewer asks questions and the research participant gives oral responses.
Y	Y	Y					3	Meta-analysis	Search for trends observed in a set of research studies that all involve the same research question.

(table continues)

References									
A	B	C	D	E	F	G	Total	Data collection method	Description
Y	Y	Y	Y				4	Observation (participant/ nonparticipant)	Researcher observes the activities being studied.
								Other qualitative research categories: By type of phenomena investigated	The following three subgroups combine and summarize a series of qualitative methods according to the type of phenomena investigated.
Y							1	a. Investigation of lived experience	Gathering information from an individual's perspective. This category of methods includes cognitive psychology, life history, phenomenography, and phenomenology.
Y		Y	Y				3	b. Investigation of society and culture	Typically involves a researcher embedded in a society or culture to learn about its characteristic features and patterns. This category of methods includes cultural studies, action research, ethnography, ethnomethodology, and symbolic interactionism.
Y							1	c. Investigation of language and communication	Study of language, text, and other types of communication. This category of methods includes ethnographic content analysis, ethnoscience, hermeneutics, narrative analysis, semiotics, structuralism, and poststructuralism.

(table continues)

References									
A	B	C	D	E	F	G	Total	Data collection method	Description
Y		Y					2	Other techniques (documents, media, photographs, physical evidence, etc.)	Examples include examining physical evidence, reviewing media related to the activities being studied, examining photographs, examining children's drawings, and/or reading essays and homework papers.
Y	Y	Y	Y	Y	Y	Y	7	Surveys/questionnaires	Documents that ask the same questions of all individuals in the sample.

Note. The references are: (a) Gall et al., 2003; (b) Graziano & Raulin, 2000; (c) Muchinsky, 2000; (d) Weiss, 1998; (e) HRSA, 2002a; (f) Soriano, 1995; and (g) Witkin & Altschuld, 1995. A check mark indicates that the authors identified the particular method as a method used in descriptive studies.

study, (d) consider the application of the results, and (e) consider time, costs, and other restraints. These criteria were used to winnow the pool of methods identified in Table 2. This process is described in the next sections.

Applying the five criteria to RWTII needs assessments. The first criterion for selecting methods suggests that a researcher consider the characteristics of the target population. The primary target population in a RWTII needs assessment is PLWH/A within the program's jurisdiction (HRSA, 2002a, 2002b). Individual concerns about confidentiality and anonymity due to the stigma surrounding HIV/AIDS is a characteristic of PLWH/A populations (Partnership for Community Health, 1999). PLWH/A also have increased health and financial challenges (Cunningham et al., 1995; Kass et al., 1994; Montoya et al., 1997).

The second criterion for selecting methods suggests that a researcher consider the geographic area over which the population is spread. The geographic area of a RWTII needs assessment is the size of a state in the US or the size of a US territory, depending on which RWTII program is examined. Title II jurisdictions include all 50 states in the US, the District of Columbia, Guam, Puerto Rico, Northern Mariana Islands, Micronesia, Territory of America Samoa, Republic of Palau, Marshal Islands, and the Virgin Islands. The boundaries of these jurisdictions are almost identical to state or US territory lines (HRSA, 2004b).

The third criterion for selecting methods suggests that a researcher consider the purpose of the study. The purpose of a RWTII needs assessment is to identify the current health-related service needs of PLWH/A within the RWTII program's jurisdiction (HRSA, 2002a, 2002b). A RWTII needs assessment serves as one of the primary data

sources for CARE Act resource allocation within its respective jurisdiction (Bradford et al., 2000; HRSA; Kahn et al., 1998; McKinney et al., 1993), so generalizable results are important.

The fourth criterion for selecting methods suggests that a researcher consider the application of the results. The results of a RWTII needs assessment are used by planning committee members in the community planning process, so it is important to add depth and context to help planning committees understand the results. HIV/AIDS planning committees consist of HIV-positive consumers, advocates for the HIV community, and health professionals from public and private organizations (HRSA, 2002b).

The fifth criterion for selecting methods suggests that a researcher consider the time, costs, and other constraints associated with each particular method. This criterion varies depending on the particular method employed and there are at least eleven methods described in Table 2. Examination of the time, cost, and other constraints of all of the methods in Table 2 might detract from the current line of inquiry so the time and cost analyses are discussed later in this chapter.

The primary emphasis of the "appropriate data collection methods" element, within the context of this dissertation, is on enhancing the accuracy of the needs assessment results. The accuracy attribute requires evaluators to use defensible information sources that will generate adequate data (Joint Committee, 1994). It should be noted, however, that the five criteria also contribute to the refinement of all four of the attributes of sound evaluations. For example, the first criterion contributes to the propriety attribute in that addressing confidentiality and anonymity concerns is part of an ethical evaluation. The second criterion contributes to the feasibility attribute in that the

geographic area over which a population is spread has direct implications on the cost associated with the study. The third and fourth criteria contribute to the utility attribute in that the purpose of the study and application of the results are associated with considering the information needs of the intended users. Examining the cost, as the fifth criterion requires, provides evidence bearing on the feasibility attribute. These examples demonstrate how one of the seven elements of high quality needs assessments emphasizes the accuracy attribute while also contributing to the utility, feasibility, or propriety attributes.

Appropriate methods for RWTII needs assessments. The author assessed the suitability of the data collection methods from Table 2 using a two-step approach. The first step consisted of an assessment of the first four criteria and the second step consisted of an assessment using the fifth criterion. The second step pertaining to the fifth criterion is presented in the next section.

The author established five questions to address the first four criteria as they apply to RWTII needs assessments: (a) Does confidentiality or anonymity have the potential to be a serious problem? (b) Do individual health or financial challenges have the potential to be serious problems? (c) Does the geographic area of a RWTII needs assessment have the potential to be a serious problem? (d) Will the data give us generalizable results, assuming the data have external validity (these concepts are explained later in the dissertation)? (e) Will the data add depth or add context to help planning committee members understand the trends in the population? If the answers to questions one through three were "no," then the method received a check mark for that particular question. If the answers for questions four or five were "yes," then the method

received a check mark for that particular question. The check marks reflect the author's personal judgments on whether or not each method addresses each criterion.

The author asserts that practice is another factor that should help a researcher judge which methods are appropriate. This factor is not sufficient as a stand-alone factor but adds value to a combination of judgment factors such as the five criteria established in the previous section. The author felt that it might be helpful to have a check mark that represents what researchers judge to be useful based on their experience. The methods listed in Table 3 were given a check in the "Practice" column if the method was used in any of the needs assessments reviewed later in this chapter.

The author chose to use a total score of five as the cutoff point. The four methods that were above that cutoff point were: (a) archival research, (b) surveys/questionnaires, (c) group processes, and (d) interviews. These four methods were identified as the most appropriate data collection methods for RWTII needs assessments based on the criteria described above.

Time and cost associated with the top four methods. The fifth criterion for selecting methods suggests that a researcher consider the time, costs, and other constraints associated with each particular method. The author comprised research examples for each method in an effort to estimate the costs associated with the top four methods mentioned in the previous section. The results are presented in Table 4. Personnel cost estimates were derived from three hypothetical full-time equivalent positions: (a) $50,000 a year for development, planning, and coordination; (b) $25,000 a year for data collection and data entry; and (c) $15,000 a year for support.

Table 3

Suitability of Methods in RWTII Needs Assessments

Question							
A	B	C	D	E	Practice	Total	Data collection method
Y	Y	Y	Y	Y	Y	6	Archival research
Y	Y	Y	Y	Y	Y	6	Surveys/questionnaires
Y	Y	Y		Y	Y	5	Group processes
Y	Y	Y		Y	Y	5	Interviews (formal/informal)
Y	Y	Y		Y		4	Case study
Y	Y	Y		Y		4	Meta-analysis
	Y	Y		Y		3	Other techniques (documents, media, photographs, physical evidence, etc.)
							Other qualitative research categories: By type of phenomena investigated
	Y			Y		2	a. Investigation of lived experience
	Y			Y		2	b. Investigation of society and culture
Y	Y	Y				3	c. Investigation of language and communication
	Y			Y		2	Observation (participant/nonparticipant)

Note. Questions: (a) Does confidentiality or anonymity have the potential to be a serious problem? (b) Do individual health or financial challenges have the potential to be serious problems? (c) Does the geographic area of a RWTII needs assessment have the potential to be a serious problem? (d) Will the data give us generalizable results, assuming the data have external validity? and (e) Will the data add depth or add context to help planning committee members understand the trends in the population?

Table 4

Estimated Costs Associated with the Top Four Methods

	Method			
Costs	Archival	Survey	Group	Interview
Total personnel	$1,318.19	$13,363.68	$3,659.11	$2,750.03
(Yearly) $50,000.00	3 days $681.81	30 days $6,818.10	7 days $1,590.89	3 days $681.81
(Yearly) $25,000.00	5 days $568.20	45 days $5,113.80	14 days $1,590.96	14 days $1,590.96
(Yearly) $15,000.00	1 day $68.18	21 days $1,431.78	7 days $477.26	7 days $477.26
Fringe benefits at 37.5%	$494.32	$5,011.38	$1,372.17	$1,031.26
Total travel	$0.00	$750.00	$500.00	$1,200.00
Ground transportation	$0.00	$750.00	$250.00	$900.00
Accommodations/meals	$0.00	$0.00	$250.00	$300.00
Total current expense	$200.00	$5,450.00	$1,725.00	$100.00
Phone	$0.00	$50.00	$150.00	$150.00
Printing	$100.00	$500.00	$25.00	$25.00
Postage	$0.00	$750.00	$25.00	$25.00
Supplies	$100.00	$150.00	$25.00	$25.00
Incentives	$0.00	$4,000.00	$1,500.00	$500.00
Total direct costs	$2,012.32	$24,575.06	$7,256.28	$5,081.29
Number of PLWH/A assessed	1000	400	56	20
Cost per person	$2.01	$61.44	$129.58	$254.06

Note. Costs were estimated using hypothetical examples.

The hypothetical archival research example consists of an in-house search of existing databases such as the HIV/AIDS Reporting System (HARS) for up to 1,000 PLWH/A. HARS is the standard HIV/AIDS reporting system that public health professionals use throughout the country (UDOH, 2002b). It should be noted that archival research has an almost unlimited potential in that the number of records examined is only limited by the number of records in the database. The hypothetical survey research example consists of developing a reliable instrument, printing up to 1,000 surveys, mailing 1,000 surveys, and entering 400 surveys into a spreadsheet program. Survey respondents were paid a $10 incentive for their participation. The hypothetical group process example consists of developing a protocol, conducting seven focus groups with refreshments, transcription of the recorded sessions, and analyzing the results for emergent themes. Approximately 56 people participated in the focus groups and they were paid $25 for their participation. The hypothetical interview example consists of developing an interview form, conducting 20 face-to-face interviews across a wide geographic area, transcribing the recorded interviews, and analyzing the results for emergent themes. Interview participants were paid $25 for their participation.

There are specific costs associated with each method listed in Table 4 and the costs will vary depending on the degree to which each method is implemented. The number of PLWH/A assessed will change for each RWTII program, which will either increase or decrease the costs associated with each method as more or less PLWH/A are assessed. It is important to remember that methods are always bound by resources. The 2002 fiscal year allocations for RWTII programs ranged from $185 thousand in Guam to over $158 million in New York (HRSA, 2004c). Then again, Guam has reported a

cumulative total of 65 AIDS cases through December 2003 and New York has reported a cumulative total of 162,446 AIDS cases through the same time period (CDC, 2003).

The fifth criterion for selecting methods focuses primarily on the feasibility attribute as opposed to the accuracy attribute. The feasibility attribute requires the evaluator to consider the time and cost of the study (Joint Committee, 1994). The fifth criterion was presented separate from the first four criteria because cost is a variable that will change for each RWTII program. The first four criteria can legitimately winnow the pool of potential methods, but the fifth criterion pertaining to cost should not be used as a stand-alone procedure for selecting methods. While cost is important, a researcher should focus on the overall goals of all of the elements. Methods are always bound by resources, but the cost associated with each method can be manipulated.

At this point in the dissertation it is sufficient to say that four methods from Table 3 have been identified as appropriate methods for RWTII needs assessments based on the first four criteria for selecting methods. The fifth criteria pertaining to cost has shown that the four methods have different costs associated with them but cost should not be the primary factor in eliminating one of the top four methods from the list of appropriate methods. The seven elements of high quality needs assessments are interconnected and the characteristics of these elements should be considered before a decision on the suitability of a particular method is made. Evidence pertaining to the other elements is presented in the following sections.

Representative Sample

Background. The "representative sample" element refers to selecting a sample that represents the population. A population, which is defined by the researcher, is the entire set of events of interest (Graziano & Raulin, 2000). Researchers rarely study an entire population because populations are usually of considerable size. A study that assesses an entire population has the potential to quickly overwhelm the resources and capacity of the researcher, depending on the data collection method used in the study. As such, researchers often study portions or subsets of a population, which are referred to as samples (Graziano & Raulin; Peters & Eachus, 1995).

A representative sample is a prerequisite for making generalizations from the sample to the population. Reliability assessments and validity assessments are also prerequisites for making meaningful generalizations. This is another example of the interconnectivity of the seven elements of high quality needs assessments. The relationship between representative samples, reliability assessments, and validity assessments will be discussed in greater detail later in the dissertation. The relationship between these three elements also provides evidence pertaining to the four attributes of sound evaluations. The primary emphasis of the representative sample, reliability assessment, and validity assessment elements is to enhance the accuracy of results, however, the representative sample element also contributes to the propriety attribute. The propriety attribute requires an evaluator to effectively serve the information needs of the full range of participants in the targeted population (Joint Committee, 1994). Ensuring the full representation in the sample is part of that process. Evidence bearing on

the accuracy and propriety attributes as they relate to a representative sample is presented in the following sections.

Random selection. Random selection is the gold standard in achieving a representative sample. It is a powerful selection tool that is based on the laws of probability. This sampling method involves selecting units by chance with every unit within the population having an equal and independent chance of being selected. This sampling method creates a sample that is representative of all qualities of the population with a known likelihood of sampling error. Being able to estimate sampling error means that the variance observed in the sample is expected to be the same in the population. A random sample provides results that are unbiased estimates of population characteristics thus accurate generalizations can be made using sample results. In fact, some researchers argue that generalizations cannot be made without random selection (Draper, 1995; Shaver, 1993).

Random selection is the gold standard, but it is rarely feasible along all dimensions of interest (Edgington, 1966; Kish, 1987; Shadish, Cook, & Campbell, 2002; Shadish & Ragsdale, 1996). There are a variety of challenges faced when attempting to use random selection. Time constraints, budget considerations, logistical challenges, and ethical concerns all have the potential to be barriers to random selection (Mike, 1989, 1990; Shadish et al.). Confidentiality concerns also pose a challenge to randomly selecting potential participants (Fleishman, Mor, Cwi, & Piette, 1992). Random selection is typically achieved by gaining access to a complete list of population subjects and randomly selecting from that list. Similar lists exist for PLWH/A. Examples include registries kept by health departments, lists of diagnosed patients kept by health providers,

and lists of diagnosed clients kept by support service providers. Although the lists do exist, confidentiality requirements severely limit the possibility of gaining access to such lists. Agencies and providers that house these lists, however, are legally and ethically obligated to protect the confidentiality of such lists (Fleishman et al.).

In the event that access is granted to PLWH/A lists, there are additional challenges encountered when trying to contact potential participants. Access to the lists may be permitted in some cases, but individual subject concerns about confidentiality and the stigma surrounding HIV/AIDS may prevent potential participants from participating in the study. Individuals may justifiably be reluctant to participate because they do not want to be revealed in any way to persons outside of the provider's staff (Fleishman et al., 1992). The entire process of gaining access to such lists and dealing with reluctant subjects can be very time consuming and expensive. The process is usually so time consuming and expensive that researchers often resort to a different sampling method (Fleishman & Mor, 1993). Evidence of this trend in RWTII needs assessments is presented in the next section.

Review of RWTII sampling methods. A systematic review of a sample of RWTII needs assessments supported the assertion that random selection is rarely used. A complete list of RWTII grantees was used to identify the population, resulting in an *N* size of 59 (HRSA, 2004b). The methodology and results of this review are described later in this chapter.

One hundred percent of the 13 needs assessments in the review used convenience sampling (Beinecke et al., 2004; Burris, 2002; Hawaii CARES Needs Assessment Committee, 2001; Kentucky School of Public Health, 2002; Michigan Department of

Community Health, 2003; Partnership for Community Health, 1999, 2002; The Research Partnership, 2002; Tulane University School of Public Health and Tropical Medicine, 2002; UDOH, 2002a; Vermont Department of Health, 1996; Williams et al., 2002; Wisconsin Department of Health and Family Services, 2000). Convenience sampling is a method of selection in which participants are not selected at random. Participants are selected based on their accessibility and convenience. The trends evident in this review are not unique to RWTII needs assessments. Ludbrook and Dudley (1998) conducted a literature review and found that 95% of studies in the social sciences use nonrandom sampling methods. The prevalence of nonrandom sampling methods is evident throughout the literature.

The results of this review support the assertion that RWTII needs assessments use convenience sampling as opposed to random selection. Convenience sampling does not automatically create a representative sample the way random selection does. The potential for achieving representative samples using convenience sampling should be explored due to the frequent use of convenience sampling in RWTII needs assessments. Evidence pertaining to this topic is presented in the next section.

Achieving the goals of random selection. The goals of random selection are more important than random selection itself (Cook, 1993). If a researcher can achieve the goals of random selection while using another sampling method, then there is the potential for appropriate generalizations to be made from the sample results when using an alternate sampling method. Shadish et al. (2002) support this assertion in their grounded theory of generalized causal inference. They suggest that the five principles of

generalized causal inference are what researchers need to focus on instead of focusing exclusively on random selection.

The five principles of generalized causal inference bear evidence on the external validity of the results. External validity refers to the extent to which the results of a study can be generalized to individuals and situations beyond those involved in the study (Campbell & Stanley, 1963; Shadish et al., 2002). External validity also contributes to the propriety attribute. The propriety attribute requires an evaluator to disclose findings in their entirety along with the pertinent limitations (Joint Committee, 1994). One of the fundamental characteristics of establishing external validity is defining the limits of the generalization.

The five principles of generalized causal inference established by Shadish et al. (2002) provide guidance for identifying the limits of the generalization and achieving the goals of random selection. Two of the principles pertain primarily to causal inferences made from experimental studies, but three of the principles can be loosely applied to RWTII needs assessments. The two principles that do not apply in RWTII needs assessments pertain to generalizing beyond a sampled range and causal explanation. These two principles will not be reviewed in this dissertation. It is important to note, however, that there is substantial overlap between the principles of generalized causal inference and so the principles are not exclusive.

The first principle of generalized causal inference involves assessing the similarities between the sample and the population. If the percentages within a sample mirror the percentages on key characteristics observed in a population, the sample would be considered representative of the population. A representative sample is similar to the

population so appropriate conclusions can be drawn about the population based on sample results (Peters & Eachus, 1995; Shadish et al., 2002).

The second principle suggests that a researcher should establish what the typical persons, settings, treatments, and outcomes should look like in the target of the generalization based on the characteristics of the study. If the characteristics in the target of the generalization do not match the characteristics in the study, the researcher should identify the limits of the generalization (Shadish et al., 2002). For example, if the characteristics of the target of the generalization match three of the four characteristics of the study, then the researcher should identify which characteristics matched and which characteristics did not match in an effort to identify the limits of the generalization.

The third principle of generalized causal inference is concerned with ruling out irrelevancies. The researcher should establish which characteristics such as persons, settings, treatments, and outcomes are irrelevant to the results observed in the study (Shadish et al., 2002). For example, if the setting of the study did not have any bearing on the results of the study, the researcher should label that characteristic as irrelevant. Irrelevant characteristics can be excluded from the examination of surface similarities.

Recommendations presented by Gall et al. (2003) also support the assertion that the goals of random selection are more important than random selection itself. Gall et al. suggested that researchers compare the sample to the population on critical characteristics such as gender, age, ethnicity, or socioeconomic status. Gall et al. conceded that researchers rarely have comparable data on all of the critical characteristics, but researchers should try to compare the sample on as many as possible. The comparison will help the researcher determine whether the sample is representative of the population

or not. These suggestions are similar to the first principle of generalized causal inference established by Shadish et al. (2002). Gall at al. also suggested that researchers should determine the degree of similarity between populations to determine the limits of the generalizations from the sample results. This suggestion is similar to the second principle of generalized causal inference established by Shadish et al.

In summary, the primary goal of random selection is to select a sample that is representative of a population so appropriate generalizations might be made using the sample results. The principles of generalized causal inference presented by Shadish et al. (2002) and the suggestions from Gall et al. (2003) provide a reference as to how to achieve the goals of random selection. Random selection remains the gold standard in achieving representative samples, but random selection is often not possible due to the challenges faced when working with PLWH/A populations. Convenience sampling is the most widely used method of selection in RWTII needs assessments based on review presented later in this chapter. A strategy for achieving the goals of random selection while using convenience sampling is presented in the next section.

Convenience sampling and representative samples. Gall et al. (2003) suggested that inferences about the population could be made from a convenience sample if the researcher takes deliberate actions to achieve a representative sample based on the guidance mentioned in the previous section. Proportional stratified convenience sampling and a sample frame are two tools that might help RWTII programs achieve representative samples in their needs assessments. Proportional stratified convenience sampling is a method in which the researcher strives to mirror the percentages in the population during selection. The researcher takes deliberate actions to increase the

likelihood of selecting a sample that mirrors the population percentages, and yet the sample is selected based on convenience. A sample frame is a set of directions for creating a representative sample. The sample frame identifies the percentages observed in the population on critical characteristics and provides guidance as to the appropriate *n* sizes and percentages that are needed for subgroups within the sample to mirror the population. The sample frame serves as a guide for the proportional stratified convenience sampling technique. The researcher uses the sample frame to identify the percentages of each subgroup that should be present in the sample.

The needs assessment conducted by the RWTII program in Utah is a good demonstration of the application of proportional stratified convenience sampling. The researchers also used a sample frame to guide the selection process. Utah's detailed demonstration of proportional stratified convenience sampling guided by a sample frame is presented in the Results chapter of this dissertation.

Reliability Assessment

Reliability. Reliability can be assessed in a variety of ways, depending on the data collection method used. The author limited the focus of this section to the most common procedures for assessing the reliability of results generated from the top four methods used in high quality needs assessments. The top four methods were judged to be archival research, surveys, group processes, and interviews (see Tables 2 through 4).

Reliability and validity are interconnected so it is difficult to present the entire range of possibilities for assessing reliability without an understanding of validity. For example, in some cases reliability can be assessed indirectly due to the relationship

between reliability and validity. However, assessing reliability and validity separately remains the gold standard. The relationship between reliability and validity is explained in the "Validity Assessment" section of Chapter II. Some basic procedures for assessing reliability are presented in the following sections and additional procedures are presented in the "Validity Assessment" section of Chapter II.

Classical test theory. Researchers tend to apply stronger standards for reliability and validity to tests as compared to the standards for archival research, surveys, group processes, and interviews. The top four methods used in RWTII needs assessments are concerned with group level responses as opposed to individual level responses. Lower levels of reliability are acceptable when the focus is at the group level instead of the individual level. Classical test theory describes reliability and validity at the individual testing level, but the characteristics of this theory can be loosely applied to the top four methods used in RWTII needs assessments (Gall et al., 2003).

It is important to understand three assumptions in classical test theory before a discussion of reliability is presented. The first assumption in classical test theory is that each individual has a true score on a test, which is the actual amount of the characteristic measured on the test. The second assumption is that any test is expected to have a certain amount of measurement error. Measurement error is the difference between the true score and the observed score, which is the score that is actually observed. It is important to note that true scores and measurement error are hypothetical constructs that cannot be measured, but they can be estimated using certain procedures. These procedures are presented later in this section. The third assumption is that measurement error is

randomly distributed. This means that errors of measurement occur at random as opposed to occurring systematically (Nunnally & Bernstein, 1993).

In classical test theory, the reliability of a test refers to how much measurement error is present in the results. It is important to note that this definition of reliability refers to a characteristic of the results as opposed to the test itself. A test is not reliable or unreliable. Reliability is a property of the scores generated from the test (Feldt & Brennan, 1989). Reliability is presented as a reliability coefficient, which ranges from 0.0 to 1.0. A reliability coefficient of 1.0 indicates perfect reliability and a reliability coefficient of 0.0 indicates no reliability. A reliability coefficient of 1.0 indicates that there is no difference between the true score and the observed score, and a reliability coefficient of 0.0 indicates that the results are mostly measurement error. It is impossible to eliminate all measurement error so a reliability coefficient of 1.0 is never attained. A reliability coefficient of 0.7 or greater is sufficient for most research purposes (Anastasi & Urbina, 1997; Nunnally & Bernstein, 1993).

There are several approaches to assessing test reliability. Common examples that might be helpful in RWTII needs assessments include test-retest reliability (Weiss, 1998), alternate-form reliability (Graziano & Raulin, 2000), and internal consistency (Richardson & Kuder, 1939). Descriptions of each of these procedures are presented below.

Test-retest is an approach to estimating test reliability by examining the occasion of the test. The same test is given to the same individuals with a period of time between the two test administrations. A researcher would calculate a correlation coefficient between the individuals' scores on two different test occasions. The critical issue is to

determine the appropriate amount of time between administrations. If the time period is too short, individuals might remember responses from the previous occasion, which would result in artificially high reliability coefficients. If the time period is too long, individuals might go through changes during the time period that might have an impact on their results in the test (Weiss, 1998). The issue of time and cost is also of particular importance to RWTII programs. Twice the cost of a single administration and the time required to wait between administrations might become a challenge when time and cost are issues in the needs assessment.

Alternate-form reliability is a costlier version of test-retest reliability. Alternate-form is an approach to estimating test reliability by examining the form of the test that is administered. The researcher creates two parallel forms of the test and calculates a correlation coefficient between individuals' scores from the two forms. The two forms of the test can be administered at the same time or the researcher can choose to administer the two forms within a relatively short time period. Alternate-form reliability is not commonly used due to the time and cost associated with creating two versions of a test (Graziano & Raulin, 2000).

Internal consistency is the most common procedure for assessing test reliability. Internal consistency is an approach to estimating test reliability by examining the individual items of the test. This type of reliability requires a single administration of the test. There are several methods that can be used to measure a test's internal consistency (Anastasi & Urbina, 1997; Nunnally & Bernstein, 1993). The Spearman-Brown prophecy formula and the Kuder-Richardson formulas are common methods. The Spearman-Brown prophecy formula involves calculating a split-half correlation

coefficient. This is accomplished by administering the test to a sample, splitting the test in half, and correlating the scores from each half of the test. The Spearman-Brown prophecy formula corrects the split-half correlation coefficient to estimate the reliability when the entire test is administered. The Kuder-Richardson formulas are used more frequently than the Spearman-Brown prophecy formula. The common Kuder-Richardson formulas are numbered K-R-20 and K-R-21 (Richardson & Kuder, 1939).

Formula K-R-21 is an approximation of formula K-R-20 and the items need to be dichotomously scored in order for the formulas to work. Dichotomous means that there are only two possible responses. Cronbach's alpha (α) is the widely used method for computing internal consistency because it does not require the responses to be dichotomous (Gall et al., 2003). Cronbach's α is a general form of formula K-R-20. Calculating internal consistency using Cronbach's α might be the best option for RWTII needs assessment surveys because of the relative simplicity of the method and lower time and cost requirements.

Other procedures for estimating reliability. While Cronbach's α is an excellent method for estimating the internal consistency of survey items that are expected to covary, it might not be the best option for archival research, group processes, and interviews. Weiss (1998) suggested that a variant of the test-retest procedure might be the most appropriate way for assessing the reliability of archival data. The reliability of archival records might be assessed by collecting new data on the items in the archival data and correlating the old and new data. The disadvantage of this method is that new data is collected. This would have an impact on the cost analysis presented in previous sections. A variant of the Spearman-Brown prophecy might also be an option. For

example, a researcher might take any archival data that is dated 1990 or earlier and correlate it with any archival data that is dated 1990 or later. There are a variety of possible scenarios.

Calculating a correlation coefficient between the conclusions of multiple judges is a way of estimating the reliability of results from group processes or individual interviews (Frick & Semmel, 1978; Moss, 1994). In this scenario, multiple judges would attend the same group processes or interviews at the same time. The judgments of each of the judges would be correlated with each other in an effort to estimate the reliability of the results. Reliability in this context would be defined as whether repeated efforts to measure the same phenomena came up with the same results.

To review, there are many ways to estimate reliability. Cronbach's α is probably the best method for measuring the internal consistency of survey items that are expected to covary. The standard proposed in this dissertation is that the reliability of the results from each method used in a RWTII needs assessment should be described. However, there are ways to indirectly address reliability through validity and other methods. Additional methods for indirectly assessing reliability are described in the "Validity Assessment" and "Combination of Qualitative and Quantitative Methods" sections in Chapter II.

Validity Assessment

Validity. Validity can be generally defined as the appropriateness and usefulness of inferences made from results. Reliability is a prerequisite for validity, which demonstrates the interconnectivity of some of the seven elements of high quality needs

assessments. This relationship also bears evidence that accuracy is the primary emphasis of the reliability assessment and validity assessment elements, although they also contribute to the utility and propriety attributes. Examples are provided in the subsections within this section.

Results cannot be valid without being reliable, but they can be reliable without being valid. Valid inferences cannot be made from test scores with zero reliability because scores with zero reliability are mostly measurement error. The relationship between reliability and validity allows researchers to indirectly show that results are reliable by showing that they are valid (Moss, 1994). In some cases, if results have evidence of validity then the researcher can assume the results are reliable because reliability is a prerequisite for validity. It should be noted, however, that assuming valid results are reliable has limited applicability and the best option is to do separate reliability and validity assessments.

Test validity. As with reliability, researchers tend to apply stronger standards for measurement validity to tests as compared to the top four methods for data collection commonly used in RWTII needs assessments (Gall et al., 2003). Test validity is used as a format in this dissertation to present the concepts of validity, but the types of validity can be loosely applied to the top four methods used in RWTII needs assessments. An explanation of the common types of validity is presented below.

Test validity refers to the validity of the interpretation of test scores. This definition emphasizes the concept that test scores are neither valid nor invalid but the inferences made from the test scores can be valid or invalid. Common types of validity

associated with test validity are face validity, criterion validity, construct validity, and content validity (Shadish et al., 2002).

Face validity is an approach to estimating test validity based on the appearance of the test. Face validity consists of a casual review of the test to inspect the test items. The reviewer makes a subjective judgment as to whether or not the test will be viewed as credible in the target population (Nevo, 1985). Face validity indirectly contributes to the utility attribute. The utility attribute requires an evaluator to establish credibility as part of an effort to achieve maximum acceptance of the results (Joint Committee, 1994). Poor face validity might undermine the credibility of the researcher by raising suspicions about the researcher's competency.

Most methodologists do not hold face validity in high esteem, but most would agree that stakeholder involvement is an important thing. Face validity involves stakeholders as the reviewers of the test. Stakeholders casually review the test and make subjective judgments about the credibility of the test. It is important to note that the author uses the term "stakeholder involvement" throughout this dissertation to refer to the process of involving stakeholders in the face validity assessment.

Criterion validity is an approach to estimating test validity based on the relationship between tests. There are two types of evidence for criterion validity: (a) concurrent evidence, and (b) predictive evidence. Concurrent evidence would demonstrate that the results from a test would correlate positively with results from similar tests that were conducted around the same time. Predictive evidence would demonstrate that the results from a test would predict some phenomenon in the future (Frick & Semmel, 1978; Simner, 1989).

Content validity is an approach to estimating test validity based on the range of concepts within a construct. A content valid test would include the full spectrum of concepts within a construct (Tindal & Nolet, 1996). Content validity is typically assessed by content experts who define the domain that the test should cover and then determine how well the test represents that particular domain (Gall et al., 2003).

Construct validity is an approach to estimating test validity based on the operational definition of the constructs. A researcher must correctly operationalize the constructs in order to achieve construct validity. Examining the correlations between indicators of particular constructs can generate evidence pertaining to construct validity. The researcher can examine these relationships to confirm that expected relationships exist. There are two types of evidence for construct validity: (a) convergent evidence, and (b) discriminant evidence. Convergent evidence would demonstrate that measures of one construct correlate positively with measures of the same or similar constructs. Discriminant evidence would demonstrate that measures of one construct correlate negatively with measures of different constructs (Campbell & Fiske, 1959; Cook & Campbell, 1979; Cronbach & Meehl, 1955).

It should be noted that assessing construct validity is not end-all approach to establishing the accuracy of results. Campbell and Fiske (1959) argue that invalid measures are all we have to validate our tests against. Construct validity does not address the accuracy of results by itself because we do not have criterion to judge against. Crano (2000) supports Campbell's assertions by pointing out that assessing construct validity is far from a universal remedy. Providing convergent and divergent evidence enhances our confidence in the construct validity of the results, but additional measures of reliability

and validity strengthens our confidence even more. This supports the author's assertion that separate reliability and validity assessments are the gold standard. While assessing reliability through validity is possible, our confidence is strengthened when separate assessments are conducted.

Guidelines for reliability and validity assessments. The author has given a few examples of how RWTII programs can estimate the reliability and validity of the results from their needs assessments. The examples presented in this dissertation represent the basic approaches to assessing reliability and validity. The interconnectivity of reliability and validity provides a way to lessen the need for the estimation of reliability for certain methods if it would be easier or more cost effective to focus on the estimation of validity. However, separate reliability and validity assessments remain the gold standard.

Based on the literature review, there are some basic guidelines for addressing reliability and validity that might be helpful in RWTII needs assessments. One guideline is that the validity of the results from each method used in the needs assessment should be demonstrated through criterion-related evidence, construct-related evidence, or content-related evidence of validity. Another guideline is that the internal consistency of surveys should always be reported when there are multiple items of the same construct. Cronbach's α seems to be the best solution for assessing the internal consistency of survey items that are expected to covary. Another guideline is that the researcher should estimate the reliability of other methods in the needs assessment when possible. This guideline might be followed indirectly if the researcher adequately demonstrates the validity of the methods used in the needs assessment.

The interconnectivity of the seven elements of high quality needs assessments has been demonstrated in the discussion of the first four elements. Interconnectivity is important because it can help strengthen our confidence in the results. The more elements are added to the list, the easier it becomes to build confidence in the results. This trend continues in that the next three elements also strengthen our confidence in the results.

Combination of Qualitative and Quantitative Methods

Combination of methods. The "combination of qualitative and quantitative methods" element is particularly helpful in supporting the goal of validating results, particularly when the reliability and validity assessments are not conducted. The importance of the "combination of qualitative and quantitative methods" element depends not on the intrinsic value of multiple methods by itself, but on the contribution the element makes to reliability and validity. This element refers to utilizing a combination of methods from both qualitative and quantitative disciplines in an effort to capitalize on the strengths of each type of method and to enhance the accuracy of the results. Qualitative methods develop knowledge primarily through collecting verbal data through the intensive study of cases. Quantitative methods develop knowledge primarily through collecting numerical data from samples (Altschuld & Witkin, 2000; HRSA, 2002a, 2002b).

Many researchers advocate using a combination of methods (Berkowitz, 1996; HRSA, 2002a, 2002b; McKillip, 1987; Petersen & Alexander, 2001; Witkin & Altschuld, 1995) and some feel that it is impossible to fully understand the needs of a population

based on a single source of information (Altschuld & Witkin, 2000). The complementary relationship between qualitative and quantitative methods helps address this issue. Qualitative and quantitative methods complement each other by playing the roles of confirmation and discovery (Gall et al., 2003; Shadish et al., 2002). A researcher can use qualitative or quantitative methods to discover knowledge and use other qualitative or quantitative methods to confirm that knowledge. This complementary relationship can help RWTII programs address the reliability assessment and validity assessment elements mentioned in this dissertation. For example, assessing the similarities between qualitative and quantitative results might provide concurrent evidence for criterion validity.

It is important to note that the distinction between qualitative and quantitative methods depends on the type of data collected by each method (Altschuld & Witkin, 2000; HRSA, 2002a, 2002b; Shadish et al., 2002). Some methods should not be categorized exclusively as qualitative or quantitative due to the fact that they can be used to collect both types of data. For example, a survey can be used to collect both qualitative and quantitative data and archival data could be qualitative or quantitative. The author explains the advantages and disadvantages of qualitative and quantitative data in the following sections using surveys and focus groups as examples. The purpose of the examples is to provide a context for the presentation of some of the characteristics of qualitative and quantitative data. The examples should not be interpreted as a categorization of these methods due to the fact that the categorization of a method depends on the type of data collected.

Qualitative data. Qualitative methods provide researchers an opportunity to probe deeper into the data due to the intensive study of cases (Altschuld & Witkin, 2000; Berkowitz, 1996; Gall et al., 2003; Graziano & Raulin, 2000; Weiss, 1998). Many studies have illustrated the value of qualitative methods as a means to validate and enhance data generated from a quantitative method (Encandela et al., 2003; Mann & Chaytor, 1992; Petersen & Alexander, 2001; Tipping, 1998a, 1998b). A qualitative method can help clarify underlying factors and generate important insights that might not have been identified in a quantitative method (HRSA, 2002a; Petersen & Alexander; Tipping).

One example of a qualitative method is a group process or a focus group, and the characteristics of this method demonstrate characteristics that are relevant for similar qualitative methods. Focus groups contribute personal perceptions and attitudes as they relate to a particular topic (Cassells, 2001; Cohen, Phillips, & Palos, 2001; Coreil, 1995; Meade, Calvo, Rivera, & Baer, 2003; Rawl, Menon, Champion, Foster, & Skinner, 2000; Steckler, McLeroy, Goodman, Bird, & McCormick, 1992; Strickland, 1999; Williams, 1999). McKillip (1987) suggested that data from a focus group might carry more weight because the data is not limited to the structure of a survey and the information comes straight from the mouths of members in the target population. Focus group participants almost become partners in the research process and their contributions are an important part of the study (Cohen et al.; Meade et al.). Focus groups can provide an insider's perspective (Miles & Huberman, 1994), open new ways of thinking, and help researchers revise initial concepts (Krueger, 1998). Focus groups provide a way to interact with target populations using their own language (Kirk & Miller, 1986; Meade et al.;

Strickland). Another advantage of focus groups is that they do not discriminate against participants that might not read or write (Cohen et al.; Gray-Vickery, 1993; Kitzinger, 1994; Meade et al.; Williams).

Focus group participants can be less inhibited because they trust each other due to similar experiences (Amos, Wiltshire, Bostock, Haw, & McNeill, 2004; Meade et al., 2003). This benefit might prove to be useful in RWTII needs assessments given the stigma surrounding HIV/AIDS. Several researchers have indicated that focus groups provide a relaxing environment that encourages discussion among participants (Amos et al.; Encandela et al., 2003; Highnet, 2003; Meade et al.).

A disadvantage of focus groups and similar qualitative methods is the potential bias that might be introduced due to small group sizes, outspoken members, or differences in opinion between group members (Altschuld & Witkin, 2000; Meade et al., 2003; Morgan, 1998a, 1998b). In some instances, facilitators do not have any control over who chooses to participate (McKillip, 1987). Another issue is lack of representation in the sample. It is almost impossible to achieve a representative sample, even with the guidelines presented in the "Representative Sample" section in Chapter II, due to the small group sizes (Harlow & Turner, 1993; Lareau, 1983; McKillip, 1987; Robins, 1982). Due to these weaknesses, it is often difficult to use focus group information as a stand-alone source of information (Berkowitz, 1996; McKillip).

Quantitative data. Quantitative methods typically involve collecting numerical data from every case in the sample. The results can be generalized to a target population if a representative sample has been achieved. Quantitative methods generate data that has the potential to be analyzed using an array of statistical techniques (Altschuld & Witkin,

2000; Graziano & Raulin, 2000). Quantitative data tends to be more objective than qualitative data because the interpretations are based on universal standards for analyzing the numerical data as opposed to subjective interpretations of verbal data (Weiss, 1998).

Surveys are by far the most utilized quantitative data collection technique (Berkowitz, 1996; Harlow & Turner, 1993; HRSA, 2002a, 2002b; Lareau, 1983). They allow direct feedback from the target population and they can be tailor-made for a specific population (HRSA, 2002a; McKillip, 1987). Another advantage of a survey is that the unavailability of participants is minimized because the participants can take the survey whenever it is convenient. If the survey is designed correctly, confidentiality is maintained and the participant might see it as less threatening (Lockyer, 1998). People might be more willing to participant due to the anonymity of a survey. This is particularly useful when working with HIV/AIDS populations due to subject concerns about confidentiality and the stigma surrounding HIV/AIDS. Another advantage to using surveys is that a survey is the least expensive way to collect new information from a large population (HRSA, 2002a; Lockyer).

The two major weaknesses of surveys are self-report and nonresponse bias. Follow-up techniques should be used to reduce the effect of non-response bias. Possible techniques include reminder postcards and second mailings (Lockyer, 1998). Efforts should be made to contact nonresponders to improve representation in the sample and to minimize the effects on nonresponse bias. Even with a perfect survey and a high response rate, researchers still need to be aware of the dangers of self-report bias (McLain, 1992). A survey is an individual's self-reported perceptions so the validity of the results should be confirmed before the results are generalized to the population.

Using a combination of methods is one way to reduce the effects of self-report bias and to estimate the validity of the results (Altschuld et al., 1997; Altschuld & Witkin, 2000; Berkowitz, 1996; Cullen et al., 1997; Demarest, Holey, & Leatherman, 1984; Goering & Lin, 1996; Gutsche, Martin, Rumel, & Seaborn, 1996; Lipsey et al., 1996; McKillip, 1987; Miller & Solomon, 1996; Witkin & Altschuld, 1995).

Designing a combination of methods. Caracelli and Greene (1997) suggest that combinations of methods or mixed-method designs can be grouped into two broad categories. The first category is mixed-method component designs. In mixed-method component designs, the methods are employed separately and kept separate throughout the study. A design where the results from one dominant method are enhanced by another method and the methods are kept separate throughout the study is an example of a mixed-method component design. The "components" or data collection methods are employed separately and remain separated. In a RWTII needs assessment, using a focus group to enhance the results generated from a survey is an example of a mixed-method component design. The second category identified by Caracelli and Greene is mixed-method integrated designs. In mixed-method integrated designs, the methods are integrated and remain integrated throughout the study. A design in which one method is located within another method is an example of a mixed-method integrated design. For example, administering a survey during a focus group is a mixed-method integrated design.

It should be noted that the focus of each method in the design has an impact on the ability to validate or add context between methods. For example, methods can add context and help validate each other if they are employed separately, but they examine

the same thing. Methods might not add context or validate each other if they are employed separately and examine different things. Validation between methods in an integrated design might be questionable because the methods were not employed separately.

Both categories of designs offer their own unique advantages and disadvantages, however, the mixed-method component design is probably the best option in the context of the seven elements of high quality needs assessments. The crucial feature of mixed-method component designs is that the methods are employed separately and remain separate throughout the entire study. Keeping the data collection methods separate enhances their contribution to reliability and validity because the methods are employed independent of each other. Independent data sources enhance our confidence in the reliability and validity assessments.

Both categories of mixed-method designs have the same primary goals due to the fact that they both employ a combination of methods (Caracelli & Greene, 1997). Cook (1985) labeled the practice of using a combination of methods as an example of critical multiplism. Critical multiplism is a general research methodology that advocates the integration of theories and methods (Letourneau & Allen, 1998; Shadish, 1993) in a way that minimizes biases (Cook, 1985; Shadish, 1993). It eliminates the forced choice between quantitative or qualitative methods (Wildemuth, 1993) by creating packages of imperfect methods (Shadish, 1993). The methods are imperfect because all research methodologies have limitations (Wildemuth, 1993). The goal is to create a methodological design where the each method addresses the limitations of another

method to reduce the bias introduced in part by these imperfections. The methods are selected based on the research questions being addressed (Cook, 1985).

The primary benefit of using a combination of methods is that each method can add context and help validate the results from each method. Several researchers suggest that high quality needs assessments should use a combination of methods (Berkowitz, 1996; Berkowitz, Carter, Fergusen, & Reviere, 1996; HRSA, 2002a, 2002b; Lockyer, 1998; McKillip, 1987; Soriano, 1995; Weiss, 1998; Witkin & Altschuld, 1995). The number and type of methods employed depends on the goals of the particular study. The methods chosen should complement the overall design and help answer the particular research questions (Berkowitz; HRSA). Issues pertaining to the overall design of a RWTII needs assessment are discussed in the next section.

Comprehensive Assessment

The "comprehensive assessment" element refers to the definition of the scope of a needs assessment. RWTII needs assessments are a requirement stipulated in the CARE Act, which is managed by HRSA under the US Department of Health and Human Services (HRSA, 2002a, 2002b). HRSA guidance pertaining to the definition of a comprehensive needs assessment will be the focus of the review in this section. A RWTII needs assessment is defined in this dissertation as a process of collecting primary level information (Altschuld & Witkin, 2000; Berkowitz, 1996; Petersen & Alexander, 2001; Witkin, 1984, 1994; Witkin & Altschuld, 1995) on the health-related service needs of PLWH/A within the RWTII program's jurisdiction (HRSA). This definition implies

that the primary purpose of a RWTII needs assessment is to determine the current state of need (Kaufman, 1988, 1992; Witkin & Altschuld).

HRSA stipulates that a comprehensive RWTII needs assessment should assess the health-related service needs among PLWH/A in the program's jurisdiction, including an assessment of the barriers that prevent PLWH/A from receiving services. Assessing the health-related service needs should encompass the full spectrum of services offered to PLWH/A within the jurisdiction. The needs assessment should gather an array of information in order to identify trends or common themes among the broad range of service categories, geographic areas, and target populations (HRSA, 1996, 1998, 2002a, 2002b). This is another example of the interconnectivity of the elements in that comprehensiveness is a counterpart of content validity. The "comprehensive assessment" element is concerned with the assessment of the full spectrum of services and barriers to receiving those services. Content validity is concerned with ensuring the full spectrum of content within each construct is assessed. Barriers and each service category in the full spectrum of services are examples of constructs in a RWTII needs assessment.

The author did not find a definition of the full spectrum of health-related services anywhere in the literature. The author assumes that there is not a definition because it is almost impossible to identify a list of services or barriers that are common to all RWTII jurisdictions. Each state, territory, or jurisdiction has different health-related service delivery systems, target populations, and barriers. However, it is possible to estimate what might be included in a comprehensive health-related services list based on universal norms for health care. A comprehensive list of health-related services would probably include broad categories such as: (a) primary medical care, (b) dental care, (c) vision

care, (d) case management services, (e) housing services, (f) food services, and (g) other services such as mental health, substance abuse, and transportation. The author feels that it is reasonable to expect that the categories in this basic list would be included in the definition of the full spectrum of health-related services.

The primary emphasis of the "comprehensive assessment" element is to accurately describe the health-related service needs of PLWH/A within a RWTII program's jurisdiction, but the element also contributes to the utility attribute. The utility attribute requires evaluators to collect a broad range of information in order to adequately address the evaluation questions (Joint Committee, 1994). Collecting information across the entire spectrum of health-related service, including an assessment of the barriers that prevent PLWH/A from receiving services, help address the goals of this attribute.

Methods That Allow Reasonable Replication

The importance of a methods section. The American Psychological Association (2001) has suggested that the methodology section should provide sufficient detail so that a reader might reasonably replicate the study. The methodology section is critically important because it documents the steps a researcher takes to address the seven elements of a high quality needs assessment. The seven elements established in this dissertation are meant to provide a way to potentially improve the quality of RWTII needs assessments. In practice, however, there is the possibility that researchers do not implement the elements correctly or to their full extent. Providing sufficient detail in the methodology section of a needs assessment report allows a reader to independently judge the quality of a particular needs assessment. This is particularly important if the

reliability and validity assessments were not conducted because it allows the reader to estimate how valid and reliable the results might be based on any possible sources of error or design flaws identified in the methods section.

What a methods section should include. The methodology section should include a subsection pertaining to issues related to the population. The researcher should define the population that the study was originally intended to measure (Wilkinson & Task Force on Statistical Inference APA Board of Scientific Affairs, 1999). Sufficient details describing the key characteristics of the population should be provided in an effort to describe the limits of the generalization (Shadish et al., 2002). Key characteristics to include might be gender, age, ethnicity, or socioeconomic status (Gall et al., 2003). Providing sufficient details on these characteristics will allow readers to determine the generalizability of the findings to populations that they might be interested in (Wilkinson & Task Force on Statistical Inference APA Board of Scientific Affairs).

The methodology section should also include a subsection describing the sample and the sampling methodology. The researcher should provide sufficient detail on how the participants were selected so that another researcher might reasonably replicate the selection process. A disclosure of deliberate actions taken during selection in an effort to create a representative sample should also be included when applicable (Wilkinson & Task Force on Statistical Inference APA Board of Scientific Affairs, 1999).

An assessment of the representative characteristics of the sample should also be included in the sample subsection. Wilkinson and the Task Force on Statistical Inference APA Board of Scientific Affairs (1999) suggested that the case for the representativeness of a convenience sample can be strengthened by explicit comparison of sample

characteristics with those of a defined population across a wide range of variables. The strategy of using a sample frame, as described in the "Representative Sample" section of Chapter II, is one way to accomplish this goal. Gall et al. (2003) suggests that a researcher compare the sample and population on as many key characteristics as possible. Characteristics that are irrelevant to the results observed should also be identified.

A subsection describing the design and activities related to data collection should also be included in the methodology section of the report. The researcher should identify the methods selected and the rationale for selecting those methods. At a minimum, the internal consistency estimate for the survey should be included. A description of the mixed-method design used in the study might be presented (Caracelli & Greene, 1997) along with a description of the complementary relationship between the methods in the design. The methodology section should also include a subsection describing the variables assessed. Sufficient detail pertaining to the variables assessed should allow a reader to determine whether or not the study was comprehensive. The process and rationale for defining the scope of the study might also be included (Wilkinson & Task Force on Statistical Inference APA Board of Scientific Affairs, 1999).

There should be a subsection describing how the results from the study were analyzed (Schmidt, 1996). There should also be sufficient detail describing the reliability and validity analyses and the results might be presented in the methodology or results sections of the report. The researcher should follow the suggestions for addressing reliability and validity as presented in the "Reliability Assessment" and "Validity Assessment" sections in Chapter II.

Review of RWTII Needs Assessments

Evidence bearing on the second goal of this dissertation is presented in this section. The seven elements of high quality needs assessments are used to review the quality of a sample of RWTII needs assessments. The author provides details pertaining to the methodology and the results of the review.

Methods for the Review

Population, sample, and selection. The author reviewed a sample of RWTII needs assessments in an effort to establish the current level of quality of RWTII needs assessments. The population was defined as the 59 Title II grantees, which include all 50 states in the US, the District of Columbia, Guam, Puerto Rico, Northern Mariana Islands, Micronesia, Territory of America Samoa, Republic of Palau, Marshal Islands, and the Virgin Islands (HRSA, 2004b). The author aimed for a sample size of 30.

A letter was sent to 58 of the 59 Title II grantees to request a copy of their needs assessment report (HRSA, 2004b). A letter was not sent to Utah because the author of this dissertation was involved in writing the 2002 Utah HIV/AIDS needs assessment report (UDOH, 2002a). The needs assessment from Utah was used in the systematic review of RWTII needs assessments, but a letter requesting a copy of the report was not necessary because the author already had access to a copy of the report.

Seventeen RWTII programs responded to the initial mailing. Twelve RWTII programs responded by sending their needs assessment report including Arkansas (Burris, 2002), Florida (Williams et al., 2002), Hawaii (Hawaii CARES Needs Assessment Committee, 2001), Indiana (Partnership for Community Health, 2002),

Kansas (The Research Partnership, 2002), Kentucky (Kentucky School of Public Health, 2002), Louisiana (Tulane University School of Public Health and Tropical Medicine, 2002), Massachusetts (Beinecke et al., 2004), Michigan (Michigan Department of Community Health, 2003), Oregon (Partnership for Community Health, 1999), Vermont (Vermont Department of Health, 1996), and Wisconsin (Wisconsin Department of Health and Family Services, 2000). RWTII program staff from Alaska (S.A. Jones, personal communication, July 4, 2004), California (D. Pierce, personal communication, July 13, 2004), North Carolina (M.A. Chap, personal communication, July 7, 2004), New York (H. Cruz, personal communication, June 16, 2004), and Pennsylvania (J. Valentino, personal communication, July 13, 2004) contacted the author personally to explain that they did not have a needs assessment report.

The author started conducting follow-up calls approximately one month after the initial letter of request had been sent out. The author continued to contact RWTII programs by phone until the desired sample size of 30 was achieved. RWTII program staff from Arizona (T. Radke, personal communication, July 27, 2004), Colorado (D. Remson, personal communication, July 27, 2004), Connecticut (W. Richardson, personal communication, July 27, 2004), Delaware (S. Tanner, personal communication, July 27, 2004), Georgia (J. Rogers, personal communication, July 27, 2004), Guam (O.T. Josie, personal communication, July 27, 2004), Iowa (P. Young, personal communication, July 27, 2004), Illinois (J. Nuss, personal communication, July 27, 2004), Maryland (L. Soloman, personal communication, July 27, 2004), Montana (J. Nielsen, personal communication, September 16, 2004), New Hampshire (A.K. Paglia, personal communication, September 9, 2004), and Nevada (R. Whitely, personal communication,

July 27, 2004) explained that they did not respond because they did not have a needs assessment report.

Thirteen needs assessment reports were received from the initial letter of request mailing and follow-up calls did not produce any additional needs assessment reports. This trend might be a result of the broad guidance provided by HRSA based on conversations the author had with staff from various RWTII programs in the sample (n = 30). HRSA does not require RWTII programs to complete a report of the findings from their needs assessments. The CARE Act stipulates that each RWTII program should conduct a needs assessment, but it does not define a report-writing requirement. HRSA simply requires RWTII programs to conduct needs assessments and report the results in their application for funding (HRSA, 2002a). As a result, many RWTII programs collect needs assessment information for their application for funding but fail to create a report documenting their needs assessment because it is not required. This conclusion is based on the personal conversations the author had with staff from RWTII programs in the sample.

The guidance from HRSA tends to be broad and open to interpretation based on conversations the author has had with staff in RWTII programs. One example of a broad HRSA definition was presented in the "Comprehensive Assessment" section of Chapter II. HRSA broadly defines a comprehensive needs assessment as one that assesses the full spectrum of health-related service needs of PLWH/A in the program's jurisdiction but fails to precisely define what the full spectrum should include (HRSA, 1996, 1998, 2002a, 2002b). This position is understandable given the broad range of service delivery systems, target populations, and barriers that exist across RWTII grantees. HRSA's

broad definitions might be a result of the broad range of circumstances that apply in RWTII programs. However, HRSA might consider refining definitions in an effort to enhance the quality of RWTII needs assessments.

The possibility of developing refined definitions that might improve the quality of RWTII needs assessments is exemplified in this dissertation. HRSA stipulates that RWTII needs assessments should create a sound information base for planning and decision making (HRSA, 2002a) but fails to provide adequate definitions of the techniques used to create sound needs assessment data. The seven elements of high quality needs assessments established in this dissertation is an example of guidance for RWTII programs on how they might improve the soundness or quality of their needs assessments. The author believes that the seven elements are broad enough to allow flexibility for RWTII programs while providing a refined definition of what a sound needs assessment should entail.

Measuring the seven elements in the sample. The author used the seven elements of high quality needs assessments, as the basis for the systematic review of RWTII needs assessments. The author created a scoring system to evaluate how well each RWTII needs assessment addressed each element. A summary of the scoring system is presented in Table 5.

Each needs assessment was given a point for each characteristic that the particular needs assessment addressed. The results are presented later in this chapter. Check marks indicate that the needs assessment addressed the particular characteristic and dash marks indicate that the author could not determine whether or not the needs assessment

Table 5

Summary of the Scoring System

Element	Characteristic of the element	Abbreviation
Appropriate data collection methods (2 points possible)	1. Use archival research.	Archival
	2. Use surveys or questionnaires.	Survey
	3. Use group processes.	Group
	4. Use interviews.	Interview
Representative sample (3 points possible)	1. Take deliberate actions to achieve a representative sample.	Actions
	2. Assess the similarities between the sample and the population.	Similarity
	3. Address the external validity of the results.	External
Reliability assessment (2 points possible)	1. Assess the reliability of the results from the 1st method.	First
	2. Assess the reliability of the results from the 2nd method.	Second
Validity assessment (3 points possible)	1. Assess stakeholder involvement.	Stake
	2. Assess the validity of the results from the 1st method.	First
	3. Assess the validity of the results from the 2nd method.	Second
Combination of qualitative and quantitative methods (2 points possible)	1. Use qualitative methods.	Qualitative
	2. Use quantitative methods.	Quantitative

(table continues)

Element	Characteristic of the element	Code for the characteristic
Comprehensive assessment (8 points possible)	1. Assess primary medical care needs.	Medical
	2. Assess dental care needs.	Dental
	3. Assess vision care needs.	Vision
	4. Assess case management service needs.	Case
	5. Assess housing service needs.	Housing
	6. Assess food service needs.	Food
	7. Assess other needs.	Other
	8. Assess barriers.	Barrier
Methods that allow reasonable replication (5 points possible)	1. Identify the population.	Population
	2. Describe sampling methodology.	Sample
	3. Describe the design/data collection.	Data
	4. Identify the variables assessed.	Variable
	5. Describe analyses.	Analysis

Note. Needs assessments scored a point for each characteristic addressed. There are 25 points possible because there are two bonus points available under the "appropriate data collection methods" element.

addressed the characteristic. The abbreviations listed in Table 5 are simply a method for conserving space in tables presented later in this dissertation.

There were a total of 25 points possible because there are two bonus points available under the "appropriate data collection methods" element. The scoring system did not penalize needs assessments that surpassed the minimum scoring requirements of each particular element. If the needs assessment surpassed the minimum scoring requirements for the "appropriate data collection methods" element, then the points were awarded as bonus points. The "combination of qualitative and quantitative methods" element requires that a needs assessment utilize a minimum of two methods in the study. This is the logic behind the two points possible under the "appropriate data collection methods" element. A RWTII program is required to use a minimum of two methods but

might chose to use more than two. The minimum requirement of two methods was the basis for defining the points possible for the "reliability assessment" and "validity assessment" elements as well.

The characteristics addressed by each needs assessment were scored and the total score was converted to a percent. The percents were used to grade each needs assessment (see Table 6). The purpose of the grades is to identify general patterns of strengths and weaknesses, as opposed to assigning definitive grades. The grading system represents one of many ways to identify these general patterns.

Systematic Review of RWTII Needs Assessments

Representation in the sample. The author ranked every RWTII grantee in the population according to 2002 fiscal year allocations in an effort to assess the representative characteristics of the sample (HRSA, 2004c). The results are presented in Figure 1. The rank and 2002 fiscal year allocation (expressed in millions) is identified

Table 6

Grades for the Scoring System

Grade	Range (%)
A - Exemplary	90 - 100
B - Above average	80 - 89
C - Average	70 - 79
D - Needs improvement	69 or below

Note. The purpose of the grades is to simply identify general patterns of strengths and weaknesses.

NY (1st) $153.8 No report	CA (2nd) $115.6 No report	FL (3rd) $99.9 Report	TX (4th) $70.4	NJ (5th) $45.7	PA (6th) $32.3 No report	GA (7th) $31.2 No report	IL (8th) $29.0 No report	PR (9th) $28.8
MD (10th) $28.5 No report	VA (11th) $20.7	LA (12th) $19.5 Report	SC (13th) $18.1	NC (14th) $17.9 No report	TN (15th) $16.5	DC (16th) $15.5	OH (17th) $14.7	CT (18th) $13.9 No report
MI (19th) $13.8 Report	AL (20th) $11.0	WA (21st) $10.2 No report	AZ (22nd) $10.1 No report	MO (23rd) $10.0	IN (24th) $9.6 Report	CO (25th) $8.7 No report	MS (26th) $7.9	KY (27th) $6.4 Report
OK (28th) $5.8	NV (29th) $5.7 No report	WI (30th) $5.3 Report	OR (31st) $5.2 Report	DE (32nd) $4.5 No report	AR (33rd) $4.4 Report	MN (34th) $3.9	UT (35th) $3.1 Report	NM (36th) $3.0
KS (37th) $3.0 Report	HI (38th) $2.9 Report	RI (39th) $2.8	IA (40th) $1.8 No report	NE (41st) $1.7	NH (42nd) $1.3 No report	MA (43rd) $1.2 Report	ME (44th) $1.2	ID (45th) $0.9
AK (46th) $0.9 No report	VI (47th) $0.8	MT (48th) $0.7 No report	VT (49th) $0.5 Report	WY (50th) $0.3	ND (51st) $0.2	GU (52nd) $0.2 No report	SD No info.	WV No info.
FS No info.	MH No info.	MP No info.	RP No info.	Sam No info.				

Figure 1. Sample frame for the systematic review of RWTII needs assessments. The entire population of RWTII grantees is listed by abbreviated name, rank according to 2002 fiscal year allocation, and the funds allocated in the 2002 fiscal year (expressed in millions). The sample selected for the systematic review is identified with boxes and a disclosure of whether or not the RWTII grantee provided a needs assessment report. "No info" means that no information was available at the time this data was collected. The abbreviated names represent the common abbreviated names used by the US Postal Service. Abbreviated names that might need clarification include: FS – Micronesia; GU – Guam; MH – Marshal Islands; MP – Mariana Islands; PR – Puerto Rico; RP – Republic of Palau; SAM – American Samoa; VI – Virgin Islands.

Note. Created using information from HRSA, 2004c.

for each RWTII grantee. The boxes indicate which grantees were selected for the sample. The author also identified whether or not a report was obtained from each grantee in the sample.

The author estimates that the sample is representative of the population based on the funding distribution presented in Figure 1. The mean rank in the sample was 26 andthe median was 28. There was a standard deviation of 15. The mean was right in the middle with a slight negative skew indicated by the higher median. This association suggests that there is a relatively normal distribution in the sample with both extremes well represented. The sample also mirrors the population on the key characteristic of 2002 fiscal year allocation. This is the only characteristic available to assess the similarities between the population and the sample.

Results from the review. The results from the systematic review of RWTII needs assessments are presented in Table 7. The 2002 fiscal year allocations, rank according to fiscal year allocation, and scores for each of the RWTII needs assessments have been identified. The total score for each needs assessment is presented at the bottom of the column and the total score for each characteristic across all needs assessments is presented in the far right column. The total score for each needs assessment should be interpreted as the percentage of characteristics addressed by each particular needs assessment. The total score for each characteristic across all needs assessments should be interpreted as the percentage of needs assessments that addressed that particular characteristic.

A lack of reliability and validity estimates was the most common trend in the systematic review. All of the needs assessments used convenience sampling and only six needs assessments addressed at least two of the characteristics of the "representative sample" element (Beinecke et al., 2004; Hawaii CARES Needs Assessment Committee, 2001; Partnership for Community Health, 2002; Tulane University School of Public

Table 7

Systematic Review of RWTII Needs Assessments

Characteristic	RWTII Program													
	AR	FL	HI	IN	KS	KY	LA	MA	MI	OR	UT[1]	VT	WI	Row %
2002 fiscal year Title II allocation (in millions)	$4.4	$99.9	$2.9	$9.6	$3.0	$6.4	$19.5	$1.2	$13.8	$5.3	$3.1	$0.5	$5.3	N/A
Population rank by 2002 Title II allocation	33rd	3rd	38th	24th	37th	27th	12th	44th	19th	31st	35th	49th	30th	N/A
Appropriate data collection methods														
Archival	-	✔	-	✔	-	-	-	-	-	-	-	✔	✔	31
Survey	-	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	-	✔	85
Group	✔	✔	✔	✔	-	-	-	-	✔	✔	-	✔	✔	62
Interview	✔	-	-	✔	-	-	-	✔	-	✔	-	-	-	31
Representative sample														
Actions	-	-	✔	✔	-	-	✔	✔	✔	-	✔	-	-	46
Similarity	-	-	✔	✔	-	-	✔	✔	-	-	✔	-	✔	46
External	-	-	✔	✔	✔	✔	-	✔	-	-	✔	-	✔	54

(table continues)

Characteristic	RWTII Program													
	AR	FL	HI	IN	KS	KY	LA	MA	MI	OR	UT[1]	VT	WI	Row %
Reliability assessment														
First	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Second	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Validity assessment														
Stake	-	-	-	-	-	-	-	-	-	-	-	-	-	0
First	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Second	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Combination of methods														
Qualitative	✔	✔	✔	✔	-	-	-	✔	✔	✔	-	✔	✔	69
Quantitative	-	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	92
Comprehensive assessment														
Medical	✔	✔	✔	✔	✔	✔	✔	-	✔	✔	✔	✔	✔	92
Dental	✔	✔	✔	✔	✔	-	✔	-	✔	✔	✔	✔	✔	85
Vision	-	-	✔	✔	✔	-	✔	-	-	✔	✔	-	-	46
Case	✔	✔	✔	✔	✔	-	✔	✔	✔	✔	✔	-	-	77
Housing	✔	✔	✔	✔	✔	-	✔	-	-	✔	✔	✔	✔	77
Food	✔	-	✔	✔	✔	-	✔	✔	-	✔	✔	-	-	62
Other	✔	✔	✔	✔	✔	-	✔	✔	✔	✔	✔	✔	✔	92
Barrier	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	100

(table continues)

Characteristic	RWTII Program													
	AR	FL	HI	IN	KS	KY	LA	MA	MI	OR	UT[1]	VT	WI	Row %
Methods that allow reasonable replication														
Population	-	✔	✔	✔	-	✔	✔	✔	✔	✔	✔	✔	✔	85
Sample	-	-	✔	✔	✔	✔	✔	-	✔	✔	✔	✔	-	69
Data	-	-	✔	✔	✔	✔	✔	-	✔	✔	✔	✔	✔	77
Variable	-	-	✔	✔	-	-	-	-	-	✔	✔	-	-	31
Analysis	-	-	-	✔	-	-	-	✔	-	✔	✔	-	-	31
% score out of 25	40	48	76	88	52	32	60	52	52	72	72	48	56	
Grade	D	D	C	B	D	D	D	D	D	C	C	D	D	

Note. The characteristics of each element are explained in Table 5. There are 25 points possible because there are two bonus points available under the "appropriate data collection methods" element. The grades are described in Table 6. Check marks indicate that the needs assessment addressed the characteristic. Dashes indicate that the author could not determine whether or not the needs assessment addressed the characteristic. References for each needs assessment are as follows: AR – Burris, 2002; FL – Williams et al., 2002; HI – Hawaii CARES Needs Assessment Committee, 2001; IN – Partnership for Community Health, 2002; KS – The Research Partnership, 2002; KY – Kentucky School of Public Health, 2002; LA – Tulane University School of Public Health and Tropical Medicine, 2002; MA – Beinecke et al., 2004; MI – Michigan Department of Community Health, 2003; OR – Partnership for Community Health, 1999; UT – UDOH, 2002a; VT – Vermont Department of Health, 1996; WI – Wisconsin Department of Health and Family Services, 2000.

[1] The author of this dissertation was involved in writing the report for this needs assessment.

Health and Tropical Medicine, 2002; UDOH, 2002a; Wisconsin Department of Health and Family Services, 2000). The lack of assessing the representative characteristics of the sample combined with a lack of reliability and validity estimates might bring into question the quality of the results from RWTII needs assessments.

It is important to note that this systematic review was based on the author's review of needs assessment reports. There is the possibility that RWTII programs are assessing the representative characteristics of their sample, estimating reliability, and estimating validity, but they are just failing to put the results in the report. However, this possibility is unlikely based on conversations the author has had with staff from RWTII programs in the sample. The author suggests that the more likely scenario is what the evidence suggests: A majority of RWTII programs are not assessing the reliability and validity of their results, and they are not assessing the representative characteristics of their convenience samples. The evidence also suggests that many RWTII programs are not even writing reports of needs assessment results (see Figure 1). These trends are also supported by conversations the author has had with staff in RWTII programs in the sample.

Quantitative surveys (n = 11; 85%) and focus groups (n = 8; 62%) were the most common methods for data collection. All of the needs assessments used at least one of the four methods identified as the most appropriate data collection methods for RWTII needs assessments (see Tables 2 through 4 for appropriate methods). None of the needs assessments used a data collection method that was not identified as one of the top four methods for RWTII needs assessments.

A majority (n = 8; 62%) of the needs assessments used a combination of qualitative and quantitative methods. The popularity of quantitative methods was demonstrated by the 12 needs assessments (92%) that used quantitative methods. These results support the popularity of quantitative surveys (n = 11; 85%). Qualitative methods were still relatively popular with nine needs assessments (69%) implementing some kind of qualitative method.

Most of the sample (n = 8; 62%) did a good job at making sure their needs assessments were comprehensive. This might have improved if the RWTII programs would have done a better job documenting the variables that they measured. Only 31% (n = 4) of the needs assessments contained a subsection in their methodology section that described the variables that they measured. Many of the needs assessments had poor methodology sections with only four needs assessments (31%) describing the variables assessed and only four needs assessments (31%) describing the analyses used for the results.

A majority (n = 9; 69%) of the needs assessments received a "D" on the overall quality of their needs assessment, which suggests that they might need improvement. Only one needs assessment received an above average (B) quality grade. A total of 92% (n = 12) of the needs assessments received average or below average quality grades. As mentioned before, the purpose of the grades is to identify general patterns of strengths and weaknesses, as opposed to assigning definitive grades (see Table 6).

Conclusions. The author has established that the current level of quality of RWTII needs assessments is poor based on the needs assessment reports in the sample. This has direct implications on the quality of the resource allocation decisions that were

made or potentially might be made using these needs assessments as the basis of their decisions. Poor needs assessment data have the potential to have far-reaching detrimental effects on PLWH/A such as failure to receive primary medical care, life-extending drug treatments, or other important health-related services.

The seven elements of high quality needs assessments that were established in this review of literature provide potential strategies to improve the quality of RWTII needs assessments. The poor level of quality in RWTII needs assessments indicates that there is a need to demonstrate how to conduct a high quality needs assessment. Evidence bearing on this need is presented in Chapter V.

CHAPTER III

PURPOSE AND OBJECTIVES

The primary goal of this dissertation is to promote the replication of best practices in PLWH/A needs assessment research. The best practices might strengthen the ability to collect high quality needs assessment data on PLWH/A, which in turn might improve the quality and availability of health-related services for PLWH/A. With this purpose in mind, the objectives of this dissertation are presented below:

1. To establish the key elements of a high quality needs assessment within the framework of the four attributes of a sound evaluation. This is an important contribution in that the key elements might serve as a guidance tool for needs assessors or as an assessment tool for funding agencies. The author addressed this objective in the "Seven Elements of High Quality Needs Assessments" section of Chapter II.

2. To establish the current level of quality of RWTII needs assessments. If there are shortfalls in the quality of RWTII needs assessments, it is important to identify them so that RWTII programs might improve the quality of their needs assessment results. The author addressed this objective in the "Review of RWTII Needs Assessments" section of Chapter II and the results are presented in Table 7. The results showed that the level of quality of RWTII needs assessments was low. A total of 92% (n = 12) of the needs assessments in the sample received average or below average quality grades. These results suggest that providing a case example of improved practice might be beneficial.

3. To provide a case example of improved practice. The author will demonstrate how adequate application of the seven elements of high quality needs assessments might improve the overall quality of a RWTII needs assessment. The needs assessment conducted in part by the Utah HIV/AIDS Treatment and Care Program, which is the RWTII program under the UDOH Bureau of Communicable Disease Control, will be used as a case example.

CHAPTER IV

METHODS

Population and Sample

This section describes the populations and samples discussed in this dissertation. One of the objectives of this dissertation was to provide evidence bearing on the level of quality of RWTII needs assessments. Another objective was to provide a case example of improved practice. These objectives are related but certain aspects of these objectives generalize to two different populations. The two populations are described in the following sections. It is important to note that information presented in this chapter contains original methodology associated with this dissertation and methodology described in the 2004 RWTII needs assessment in Utah (UDOH, 2004b).

RWTII Grantees: Population and Sample

Population of RWTII grantees. The population of RWTII grantees is the target of generalization whenever generalizations pertaining to the seven elements of high quality needs assessments are made in this dissertation. This population is the 59 Title II grantees, which include all 50 states in the US, the District of Columbia, Guam, Puerto Rico, Northern Mariana Islands, Micronesia, Territory of America Samoa, Republic of Palau, Marshal Islands, and the Virgin Islands (HRSA, 2004b). The 59 Title II grantees represent all of the RWTII programs that receive funds through Title II of the Ryan White CARE Act (see Figure 1). The author supports the use and improvement of the

seven elements with populations outside of the RWTII population if relevant elements are applied in accordance with the professional judgment of researchers.

RWTII sample in the literature review. A sample from the RWTII population was used to establish the current level of quality of RWTII needs assessments. The methodology associated with this sample is described in the "Review of RWTII Needs Assessments" section of Chapter II. To review, the sample consisted of 30 RWTII grantees, which generated 13 RWTII needs assessment reports. The entire sample is described in Figure 1 and the 13 needs assessments are described in Table 7. The 13 needs assessments were evaluated to establish how well they addressed the characteristics of the seven elements. The review of RWTII needs assessments ($n = 13$) demonstrated that the overall quality of RWTII needs assessments appears to be low. Approximately 69% ($n = 9$) of the needs assessments received a "D" for their quality grade (see Table 7).

RWTII case example. The 2004 RWTII needs assessment in Utah is presented in Chapter V as a case example of improved practice (UDOH, 2004b). The purpose of the case example is to demonstrate one-way RWTII grantees might implement the seven elements of high quality needs assessments. The target of generalizations made from this case example, as they pertain to the seven elements, is the population of RWTII grantees.

The 2004 needs assessment was conducted in part by the Utah HIV/AIDS Treatment and Care Program, under the UDOH Bureau of Communicable Disease Control (UDOH, 2004b). The Utah HIV/AIDS Treatment and Care Program is the RWTII program in Utah. The 2004 needs assessment was a useful case example because it offered a variety of benefits pertaining to the purpose and scope of this dissertation.

One of the benefits is that the author of this dissertation was the research coordinator and the primary author of the report for the 2004 RWTII needs assessment in Utah. The author of this dissertation already had access to the needs assessment data with permission from the UDOH (see the letter of permission in the Appendix).

Selecting Utah as a case example of improved practice was based on convenience, but it was also selected for the benefits this needs assessment offered. The author had established the seven elements of high quality needs assessments, with the help of the dissertation advisory committee identified on the cover page of this dissertation, before the 2004 RWTII needs assessment in Utah was conducted (UDOH, 2004b). Accordingly, the author made an effort to improve circumstances relating to the seven elements during the 2004 RWTII needs assessment in Utah. The efforts made during this needs assessment made it a prime candidate for a case example in this dissertation.

Another advantage to using the 2004 RWTII needs assessment in Utah is that the Bureau of Communicable Disease Control at the UDOH supported implementing certain aspects of the seven elements of high quality needs assessments (UDOH, 2004b). This is discussed in greater detail in Chapter V. The Bureau of Communicable Disease Control at the UDOH also supported using the 2004 RWTII needs assessment in this dissertation.

PLWH/A in Utah: Population and Sample

PLWH/A population in Utah. The PLWH/A population in Utah is the target of generalization whenever generalizations pertaining to the specific results of the 2004 needs assessment are presented (UDOH, 2004b). In sum, the RWTII grantee population is the target of generalizations pertaining to the seven elements and the PLWH/A

population in Utah is the target of generalizations pertaining to the specific results from the needs assessment. For example, using the 2004 RWTII needs assessment in Utah to demonstrate how to adequately address the "Representative Sample" element is an illustration of what might be generalized to the RWTII grantee population. The actual sample distribution observed in the 2004 RWTII needs assessment is an illustration of what might be generalized to the PLWH/A population in Utah.

The PLWH/A abbreviation refers to the PLWH/A-aware population, as discussed at the beginning of Chapter II. Referring to the population as "aware" or "not aware" is not necessary unless a distinction between these groups is required (HRSA, 2002a, 2002b; UDOH, 2002b, 2004a). The HIV/AIDS Surveillance Program, under the Utah Department of Health's Bureau of Communicable Disease Control, has additional designations that are used to describe the PLWH/A population in Utah (see Table 8). HIV/AIDS cases in Utah are categorized as "aware" and "not aware," but they are also

Table 8

PLWH/A Population in Utah

	PLWH/A population in Utah (as of December 31, 2003)	
	PLWH/A-aware	PLWH/A-not aware
Moved cases	566	Unknown
Active cases	1,243	Not applicable
Lost to follow-up	361	Unknown
Total	2,170	Unknown

Note. Derived from UDOH, 2004a.

labeled as "active," "moved," or "lost to follow-up." A case is labeled as a "moved" case if the Surveillance Program has received some indication that the case has moved from the state. A case is considered to be an "active" case if the Surveillance Program has received some indication that the case still lives in the state. A "lost to follow-up" case is a case where the Surveillance Program cannot prove whether or not the case is active or has moved. The Surveillance Program operates under the assumption that lost to follow-up cases have probably moved from the state (UDOH, 2002a).

It should be noted that the *n* sizes presented in Table 8 describe the number of HIV/AIDS cases that are known to the HIV/AIDS Surveillance Program. All HIV/AIDS cases in Utah are reported to the Surveillance Program when they are diagnosed or when they receive HIV-related treatment, but there is the possibility that a PLWH/A-aware moves into the state without the Surveillance Program knowing about it. If the PLWH/A-aware case moves into the state and foregoes any medical treatment associated with HIV/AIDS, then the Surveillance Program would not account for that case in the numbers reported in Table 8 because the program would not know that the case exists. However, the probability of this occurring is extremely low, almost nonexistent, because PLWH/A need health-related services. It is highly unlikely that a PLWH/A-aware would move into the state and avoid HIV-related treatment (L. Clark, personal communication, February 10, 2005). Once the PLWH/A-aware case received HIV-related treatment, the case would be reported to the Surveillance Program and would be represented in the numbers reported in Table 8.

At the beginning of Chapter II, the author explained that HIV/AIDS research centers primarily around PLWH/A-aware because people need to know that they are HIV

positive in order to consider themselves part of the PLWH/A population. As a result, PLWH/A-aware are the only members of the PLWH/A population that can actually be contacted. PLWH/A-not aware exist, but it is impossible to contact or assess them as members of the PLWH/A population. For this reason, PLWH/A-not aware are typically excluded from the standard PLWH/A reference (Beinecke et al., 2004; Burris, 2002; Cunningham et al., 1995; Hawaii CARES Needs Assessment Committee, 2001; Kass et al., 1994; Kentucky School of Public Health, 2002; Michigan Department of Community Health, 2003; Montoya et al., 1997; Partnership for Community Health, 1999, 2002; The Research Partnership, 2002; Tulane University School of Public Health and Tropical Medicine, 2002; UDOH, 2002a; Vermont Department of Health, 1996; Williams et al., 2002; Wisconsin Department of Health and Family Services, 2000). Additionally, PLWH/A-aware cases that have moved from Utah or are assumed to have moved from Utah (lost to follow-up) are not assessed because they are typically no longer a concern of the state (L. Clark, personal communication, July 1, 2004). For this reason, "moved" and "lost to follow-up" cases are also excluded from the standard PLWH/A reference, in the context of this dissertation. In this dissertation, the active PLWH/A-aware cases are what the standard PLWH/A abbreviation stands for, when referring to the PLWH/A population in Utah.

The description of the PLWH/A population in Utah, which was presented above, is sufficient at this point in the dissertation. Other characteristics of the PLWH/A population in Utah such as demographic percentages and risk group percentages are presented in Chapter V. These characteristics are key points in the discussion centered

on the "Representative Sample" element in Chapter V, so they will not be presented until that point in the dissertation.

Samples in the 2004 RWTII needs assessment in Utah. The characteristics and background behind the samples in the 2004 RWTII needs assessment in Utah are key points in several discussions in Chapter V, so they will not be presented in detail until that point in the dissertation. Briefly, there was a survey sample and a focus group sample selected in the 2004 RWTII needs assessment (2004 needs assessment focus group data (Focus group data), 2004; 2004 needs assessment survey data (Survey data), 2004). The author of this dissertation collected an archival sample within the scope of this dissertation, but outside of the scope of the 2004 needs assessment (2004 needs assessment archival data (Archival data), 2004). These samples are discussed in greater detail in Chapter V. Characteristics such as the demographic percentages and the risk group percentages for each of the samples are presented in Chapter V. While many characteristics of these samples are discussed in Chapter V, there are a few sample characteristics that are associated with the data collection procedures that are presented in the next section.

Procedures

This section presents the procedures used in this dissertation and the procedures used in the 2004 RWTII needs assessment in Utah. Each section in this chapter that includes "2004 RWTII needs assessment in Utah" in the paragraph heading primarily describes the methodology of the 2004 RWTII needs assessment in Utah. It is important to note that this needs assessment was not conducted as part of this dissertation. As

mentioned previously, the author had established the seven elements of high quality needs assessments, with the help of the dissertation advisory committee identified on the cover page of this dissertation, before the 2004 RWTII needs assessment in Utah was conducted. Accordingly, the author made an effort to improve circumstances relating to the seven elements during the 2004 RWTII needs assessment in Utah (UDOH, 2004b). This is discussed in detail in Chapter V.

Design

Design in this dissertation. The author established seven elements of high quality needs assessments in an effort to determine the current level of quality of RWTII needs assessments. The methodology and results of this process are described in the "Seven Elements of High Quality Needs Assessments" and the "Review of RWTII Needs Assessments" sections of Chapter II. The current level of quality of RWTII needs assessments appears to be low (see Table 7), which suggests that demonstrating improved practice in conducting RWTII needs assessments might be beneficial.

The 2004 RWTII needs assessment in Utah was used as a case example of improved practice to demonstrate how adequate implementation of the seven elements might improve the quality of RWTII needs assessments (UDOH, 2004b). These results are presented in Chapter V. The author assessed how well the 2004 needs assessment addressed the characteristics of each element and identified potential improvements that might be made in addressing the elements. Potential consequences of failing to adequately address each element are also presented. The author also compares the 2004 needs assessment in Utah (UDOH, 2004b) to the 2002 needs assessment in Utah (UDOH,

2002a) to emphasize the quality improvements resulting from adequate implementation of some of the seven elements.

Design of the 2004 RWTII needs assessment in Utah. The research coordinator and the project managers for the 2004 RWTII needs assessment in Utah established a needs assessment subcommittee to help guide all aspects of the needs assessment. The needs assessment subcommittee consisted of HIV-positive consumers, HIV/AIDS advocates, health-related service providers, and public health professionals (UDOH, 2004b). The logic behind selecting particular data collection methods for this study is explained in the "Appropriate Data Collection Methods" section in Chapter V, so it will not be discussed here. Briefly, the research coordinator for the 2004 needs assessment used a mixed-method design (Caracelli & Greene, 1997) to address the needs assessment subcommittee's requests. In this design, the results from one dominant method are enhanced by another method. A quantitative survey was used as the primary data collection method and qualitative focus groups were included to enhance and add context to the survey results (UDOH, 2004b).

Instrument Development

Instrument development in this dissertation. The research conducted in this dissertation is primarily archival research. No data collection instruments were directly developed in conjunction with this dissertation. However, the seven elements established in this dissertation did have an influence on the instrument development conducted as part of the 2004 RWTII needs assessment in Utah because the author of this dissertation

was also the research coordinator for the 2004 needs assessment in Utah and author of the 2004 RWTII needs assessment report.

Survey development in the 2004 needs assessment in Utah. The research coordinator for the 2004 RWTII needs assessment in Utah created a draft version of the survey during the Fall of 2003 using information from the Ryan White CARE Act Needs Assessment Guide (HRSA, 2002a), the IDU and MSM surveys from the Utah HIV Prevention Program (2003a, 2003b), the 2002 needs assessment survey from the Utah HIV/AIDS Treatment and Care Program (2002), and other HIV/AIDS needs assessment reports and surveys from health departments across the United States (Beinecke et al., 2004; Burris, 2002; Hawaii CARES Needs Assessment Committee, 2001; Kentucky School of Public Health, 2002; Michigan Department of Community Health, 2003; Partnership for Community Health, 1999, 2002; The Research Partnership, 2002; Tulane University School of Public Health and Tropical Medicine, 2002; UDOH, 2002a; Vermont Department of Health, 1996; Williams et al., 2002; Wisconsin Department of Health and Family Services, 2000). The needs assessment subcommittee completed a content and item review of the survey in February 2004. Revisions were made based on the content and item review and the needs assessment subcommittee approved the pilot version of the survey in March 2004 (UDOH, 2004b).

The survey was pilot tested in March 2004 using a sample of 23 PLWH/A at the Utah AIDS Foundation. The goal was to achieve an internal consistency coefficient (Cronbach's α) of 0.70 or higher for the results from each construct. The constructs and variables are discussed in the "Variables" section of this chapter. The internal consistency of the pilot survey results is reported in Table 9. The needs assessment

Table 9

Internal Consistency: Pilot Survey Results

Construct	Cronbach's α
Usage of services	0.82
Accessibility of services	0.98
Client satisfaction	0.96
Importance of services	0.92
HIV prevention	0.90

Note. Results represent the internal consistency of the 23 survey responses in the pilot study (UDOH, 2004b).

subcommittee met in April 2004 to review the pilot survey results. The subcommittee did not recommend any changes and they approved the survey for distribution. The final version of the survey (see Appendix) was translated into Spanish and was reviewed by three Spanish-speaking public health professionals to ensure accurate translation. The survey was not pilot tested after Spanish translation due to time and resource restraints (UDOH, 2004b).

Focus group development for the 2004 needs assessment in Utah. The needs assessment subcommittee identified six target populations that they wanted to have represented in the focus groups: (a) men who have sex with men (MSM), (b) men who are not MSM, (c) women, (d) injecting drug users (IDU), (e) sex workers, and (f) youth. The project managers and research coordinator for the 2004 RWTII needs assessment in Utah created a focus group moderator outline using input from the needs assessment subcommittee, health-related service provider feedback, and preliminary results from the survey data (Survey data, 2004). The questions included in the moderator outline are

presented in Table 10. The purpose of the outline was to ensure that the moderator asked the exact same questions in every focus group (UDOH, 2004b).

Data Collection

Data collection in this dissertation. As mentioned previously, the initial data collected as part of this dissertation consisted of a sample of 30 RWTII grantees, which generated 13 RWTII needs assessment reports. The methods associated with this sample are described in the "Review of RWTII Needs Assessments" section of Chapter II. The sample is described in Figure 1 and the 13 needs assessment reports are presented in Table 7.

Table 10

Outline for the Focus Group Moderator

Focus group questions
1. Are there any barriers to receiving health-related services? If yes, what are they?
2. What do you think providers need to know in order to care for PLWH/A?
3. Are providers in your community appropriately prepared to care for PLWH/A?
4. Whose responsibility is it to prevent the spread of HIV?
5. Do you know PLWH/A who have sex under the influence of a substance? If yes, what are they using?
6. What HIV prevention services are most helpful?
7. What HIV/AIDS treatment and care services are most helpful?

The author also collected archival data within the scope of this dissertation, but outside of the scope of the 2004 needs assessment. The archival data was collected from the Ryan White database at the UDOH (Archival data, 2004). The Ryan White database is a system that tracks patterns of health-related service usage by PLWH/A in Utah. The HIV/AIDS Treatment and Care Program, under the UDOH's Bureau of Communicable Disease Control, manages the Ryan White database. Data collection consisted of printing out a standard report of frequencies of health-related service usage. The archival data contains the frequencies of health-related service usage by PLWH/A in Utah through December 31, 2003. The author collected the archival data to assess what potential contributions an additional data collection method might have provided in the 2004 RWTII needs assessment. This assessment is described in Chapter V.

The author also obtained permission to use the datasets from the 2004 RWTII needs assessment in Utah (Focus group data, 2004; Survey data, 2004) for data analyses in this dissertation. To review, the author of this dissertation was the research coordinator and the primary author of the report for the 2004 RWTII needs assessment in Utah. The author already had access to the needs assessment data and permission to use that data in this dissertation is indicated in the letter in the Appendix.

Survey data collection in the 2004 needs assessment in Utah. A proportional stratified convenience sampling technique and a sample frame (see Table 21 in Chapter V) were used in the survey data collection. This process is described in the "Representative Sample" section of Chapter V and will not be duplicated here. A total of 1,218 surveys and informed consent were distributed by hand, by mail, and through distribution sites from April 30, 2004 to July 30, 2004. The distribution sites are listed in

Table 11. A subtotal of 721 surveys was distributed by hand and through distribution sites from April 30 through June 30. Distribution sites consisted of HIV/AIDS community based organizations and other HIV/AIDS service providers. A subtotal of 497 surveys was distributed by mail on or around July 1. The mailing list was a confidential list maintained by the UDOH. The list included the names and addresses of PLWH/A throughout the state of Utah who receive health-related services from providers throughout the state. A reminder postcard was mailed to these 497 potential participants approximately two weeks after the initial surveys were mailed. A total of 75 surveys were initially returned from the 497 that were distributed on July 1 and 50 surveys were

Table 11

Survey Distribution

Distribution site	English version	Spanish version	Total
Clinic 1A – University of Utah Hospital	255	40	295
HIV Prevention Community Planning Committee	84	16	100
Ryan White Mailing List	497	-	497
Salt Lake Valley Health Department	-	10	10
Southwest Health Department	50	-	50
HIV/AIDS Treatment and Care Planning Committee	77	12	89
Utah AIDS Foundation	73	17	90
Utah State Prison	37	-	37
Veteran's Administration	50	-	50
Total	1123	95	1218

Note. The Harm Reduction Project received 50 surveys but they returned all of them because they were unable to identify HIV positive individuals.

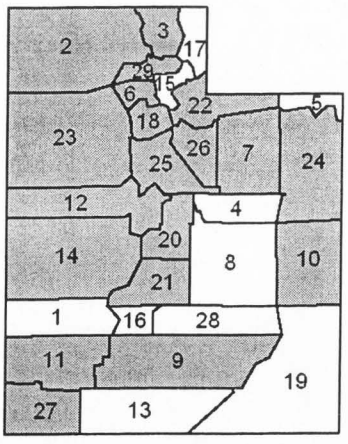
returned after the reminder postcards were mailed (UDOH, 2004b). The author of this dissertation assessed the difference between first responders ($n = 75$) and second responders ($n = 50$) using an independent t test. This process is described in the "Analysis" section of this chapter.

Surveys and informed consent were sent in English and Spanish. The English version of the informed consent had a statement in Spanish that described how to obtain the documents in Spanish, and vice versa. The informed consent also presented instructions on how to obtain a $10 food certificate for participating. The $10 food certificate could be redeemed at any Smith's Grocery Store or Associated Food Stores. The instructions on the informed consent requested the participants to write their address on the informed consent form to identify where the $10 incentive could be mailed. Participants could return the informed consent with their address on it to obtain the incentive. The returned informed consent forms documented that the research coordinator had obtained informed consent from everyone who obtained an incentive (UDOH, 2004b).

Participants were not required to provide their name in their address when they requested their incentive. Incentives were mailed to the address provided on the informed consent and they were addressed to "The Survey Participant." The research coordinator would distribute an incentive for each corresponding survey and incentive request received. For example, the research coordinator would ensure that an incentive request was obtained for each survey returned. If the surveys were collected by hand, the participant would submit the survey and incentive request at the same time but in separate collection bins. All of the respondents who submitted their surveys by mail included the

incentive card with the survey although they were not required to. When the envelopes were opened, the surveys and incentive cards were immediately placed in separate collection bins. Surveys were completely anonymous and the surveys and incentive cards were kept separate through the entire process, unless the participant combined them in a mailing envelope. When the researchers found surveys and incentive cards combined in a mailing envelope, they were quickly placed in separate bins (UDOH, 2004b).

A total of 425 surveys (35% response rate) were returned from PLWH/A throughout Utah from April 30, 2004 through August 30, 2004 (see Figure 2 and Table 12), which surpassed the needs assessment subcommittee's goal of obtaining 300 surveys. The research coordinator for the 2004 needs assessment estimated the duplication rate and assessed the internal consistency of the final survey results. These analyses are described in the "Analysis" section of this chapter.



Legend		
1 Beaver	11 Iron	21 Sevier
2 Box Elder	12 Juab	22 Summit
3 Cache	13 Kane	23 Tooele
4 Carbon	14 Millard	24 Uintah
5 Daggett	15 Morgan	25 Utah
6 Davis	16 Piute	26 Wasatch
7 Duchesne	17 Rich	27 Washington
8 Emery	18 Salt Lake	28 Wayne
9 Garfield	19 San Juan	29 Weber
10 Grand	20 Sanpete	

Figure 2. Survey response by county. Shaded counties are the counties where the survey participants lived. Ten respondents did not identify which county they were from.

Table 12

Survey Response by Distribution Site

Distribution site	Number returned	% of total returned	Response rate (%)
Clinic 1A – University of Utah Hospital	107	25.2	36.3
HIV Prevention Community Planning Committee	11	2.6	11.0
Ryan White Mailing List	183	43.1	36.8
Salt Lake Valley Health Department	4	0.9	40.0
Southwest Health Department	1	0.2	2.0
HIV/AIDS Treatment and Care Planning Committee	20	4.7	22.5
Utah AIDS Foundation	65	15.3	72.2
Utah State Prison	15	3.5	40.5
Veteran's Administration	19	4.5	38.0
Total	425	100.0	

Note. The response rate is the number returned (from Table 12) divided by the number distributed (from Table 11). Percent discrepancies are due to rounding.

Focus group data collection in the 2004 needs assessment in Utah. A total of 1,218 invitations to participate in the focus groups were given to everyone who received a survey and informed consent. An undermined amount of oral invitations to participate in the focus groups were given through providers of HIV-related services. A total of 111 PLWH/A in Utah mentioned that they were interested in participating in a focus group and only 33 PLWH/A in Utah were able to attend one of the focus groups. Additional focus groups were not scheduled due to time and resource restraints. This low (9.1%) response rate might be a result of anonymity or confidentiality concerns of the participants (UDOH, 2004b).

The research coordinator for the 2004 RWTII needs assessment in Utah attempted to create focus groups according to the needs assessment subcommittee's requests, but the type of PLWH/A who volunteered limited the composition of the groups. The focus groups created include: (a) two men's groups who were not MSM, (b) two MSM groups, and (c) one women's group. The focus groups were conducted at the Salt Lake Valley Health Department because that is where the focus group participants agreed to meet. The Salt Lake Valley Health Department is centrally located in Salt Lake City and is a location that is trusted in the PLWH/A community. Focus group participants were given a $10 food certificate from Smith's Grocery Store or Associated Food Stores. Focus group interviews were recorded and transcribed for data analysis. Focus group participants acknowledged informed consent over the phone when they were invited to the group and they signed an informed consent when they arrived at the group (UDOH, 2004b).

Focus group participants were asked to provide a fake name and some basic demographic information when they arrived at the group (see Table 13). The fake names were used throughout the group interview to protect the identities of the participants. Focus group participants did not know the real names of any other participant in the group. The research coordinator conducted all of the focus groups and followed the moderator outline to ensure that the same questions were asked in each group (UDOH, 2004b).

Table 13

Demographics of the Focus Group Participants

Distribution site	*n* size	Percents
Exposure Category		
MSM	20	61
IDU	0	0
MSM/IDU	1	3
Heterosexuals	12	36
Other	0	0
Not reported	0	0
Race/Ethnicity		
White, not Hispanic	28	85
Black, not Hispanic	2	6
Hispanic	0	0
Asian/Pacific Islander	0	0
Am. Indian/AL Native	2	6
Multi-Race	1	3
Unknown	0	0
Gender		
Male	24	73
Female	9	27
Transgender	0	0
Age at the End of 2004		
0-12	0	0
13-19	0	0
20-29	6	18
30-39	6	18
40-49	15	46
50+	6	18
Total	33	100.0

Note. Percent discrepancies are due to rounding.

Variables

This section describes the variables assessed in this dissertation and the variables assessed in the 2004 RWTII needs assessment in Utah. As mentioned before, discussion of the methodology of the 2004 needs assessment represent the methodology of that report. This applies to the 2004 needs assessment survey variables presented in this section.

Variables in This Dissertation

The initial variables assessed in this dissertation were the characteristics of the seven elements of high quality needs assessments (see Table 5). A description of the development of these variables can be found in the "Seven Elements of High Quality Needs Assessments" section of Chapter II. The methodology associated with these variables is described in the "Review of RWTII Needs Assessments" section of Chapter II. The variables helped establish the current level of quality of RWTII needs assessments (see Table 7). The variables are also used throughout Chapter V whenever the case example of improved practice is presented.

The author also collected archival data within the scope of this dissertation, but outside of the scope of the 2004 needs assessment (Archival data, 2004). As mentioned before, the archival data consisted of patterns of health-related service usage by PLWH/A in Utah so "usage of services" was the only construct in this data source. The variables within this construct are presented in the "Analysis" section of this Chapter.

Variables in the 2004 Needs Assessment in Utah

There were five constructs in the 2004 RWTII needs assessment survey: (a) usage of services, (b) accessibility of services, (c) client satisfaction, (d) importance of services, and (e) HIV prevention. The usage of services construct consisted of a list of 26 health-related services offered to PLWH/A in Utah (see Table 14). Participants were asked to indicate whether or not they used each individual service (see pages 4 -5 of the survey in the Appendix). The accessibility, client satisfaction, and importance of services constructs consisted of participants rating the accessibility, client satisfaction, and importance of each of the services listed in Table 14 (see pages 4 -9 of the survey in the Appendix). A description of the rating scales used for each of these constructs is presented in Table 15. The HIV prevention construct consisted of need and behavioral questions pertaining to HIV prevention (see pages 3, 10, and 11 of the survey in the Appendix). For example, participants were asked to indicate what HIV prevention services they felt they needed. Participants were also asked a series of behavioral questions to measure their involvement in HIV-related risk behaviors (UDOH, 2004b).

The author used the survey constructs to help define the focus group constructs. Some of the emergent themes in the focus group data were grouped according to how well they related to the constructs established in the survey. The author found themes relating to each of the survey constructs. The remaining themes were grouped by topic to identify additional constructs. The only additional construct identified in the focus group data was a barrier to service construct. This construct consisted of statements describing barriers to receiving health related services.

Table 14

Health-Related Services Offered to PLWH/A in Utah

Category	Service
Medical care	CD4 count or Viral Load Test
	Child medical care (immunizations, well checks, etc.)
	Doctor visits for HIV/AIDS
	Emergency medical care
	HIV/AIDS medications
	Medical care in your home
	Women's health (OBGYN, pregnancy testing, etc.)
Dental care	Dental services
Vision care	Vision services
Case management	Case management services
Housing services	Help with housing
Food services	Food bank
	Food vouchers
	Nutrition (vitamins, Ensure, Sustacal, etc.)
	Nutrition counseling
Other services	Alcohol or drug abuse detox
	Emergency financial assistance (utilities, rent, etc.)
	Help paying for health insurance
	Help taking HIV/AIDS medications
	HIV/AIDS support group
	Information about how HIV is spread
	Information about treating HIV/AIDS
	In-patient/out-patient substance abuse treatment
	Legal assistance
	Psychiatrist visits/mental health counseling
	Transportation (bus, Trax, shuttle, taxi, van, etc.)

Table 15

Importance, Accessibility, and Satisfaction Ratings

	Ratings					
Construct	1	2	3	4	5	6
Importance	Not important		Important		Very important	
Accessibility	Very hard to get this service	Hard to get this service	Somewhat hard to get this service	Somewhat easy to get this service	Easy to get this service	Very easy to get this service
Satisfaction	Very dissatisfied	Dissatisfied	Somewhat dissatisfied	Somewhat satisfied	Satisfied	Very satisfied

Analysis

As mentioned before, the methodology and analyses associated with the needs assessment review are explained in the "Review of RWTII Needs Assessments" section of Chapter II. This section focuses on the additional analysis of the 2004 needs assessment data, which was completed under the scope of this dissertation. A review of the analysis of the archival data is also presented here. The final part of this section presents the analyses completed under the scope of the 2004 RWTII needs assessment in Utah.

Analyses in this Dissertation

Response bias. The author of this dissertation used an independent *t* test to assess the differences between first responders ($n = 75$) and second responders ($n = 50$) to the

2004 needs assessments survey (Survey data, 2004). As mentioned before, a total of 75 surveys were initially returned from the 497 that were distributed on July 1 and 50 surveys were returned after the reminder postcards were mailed. The responses from the two groups were compared on 78 survey questions that were interval and ratio scales of measurement (Survey data, 2004). The 78 questions were the questions associated with the accessibility, satisfaction, and importance constructs (see pages 4 - 9 on the survey in the Appendix). The author used Levene's Test to assess the equality of variances and the appropriate statistical results were reviewed based on the results from the Levene's Test. There was one statistically significant difference out of the entire 78 questions that were assessed, but the statistically significant result was not practically significant. The mean difference of the statistically significant results was 0.4 on the rating scale (see Table 15 for the rating scale) and would not have changed the interpretation of the results from either group. The independent *t*-test results provide evidence that the difference between first responders and second responders was not practically significant.

Construct validity using existing 2004 needs assessment data. The author of this dissertation correlated the survey data and the focus group data from the 2004 RWTII needs assessment in Utah in an effort to provide convergent evidence of construct validity (Focus group daa, 2004; Survey data, 2004). The "HIV prevention service needs" construct was the only comparable construct between the two data sources because other constructs in the focus group data had limited ranges. For example, the survey data had 26 services (see Table 14 for a list of services) assessed in the "usage of services" construct and the focus group participants primarily discussed two services (HIV/AIDS medications and food vouchers) in the "usage of services" construct. The

"HIV prevention service needs" construct had six services that were comparable in the survey and focus group data: (a) need for condoms or lubricants, (b) need for financial assistance, (c) HIV prevention education needs, (d) mental health services, (e) clean needles or bleach kits, and (f) no expressed need for HIV prevention services (UDOH, 2004b).

The author of this dissertation ranked the HIV prevention service themes presented in the focus groups according to how frequently they were discussed: (a) no expressed need for HIV prevention services, (b) need for condoms or lubricants, (c) HIV prevention education needs, (d) mental health services, (e) clean needles or bleach kits, and (f) need for financial assistance. The ranked HIV prevention service themes from the focus groups were correlated with the number of survey responses associated with each theme (see Table 16). The results are presented in the "Validity Assessment" section of Chapter V.

Table 16

Convergent Evidence of Construct Validity: HIV Service Needs Construct

HIV Prevention Service	Focus group rank	Number of survey responses
No need	1	147
Condoms or lubricant	2	40
Education	3	23
Mental health	4	16
Clean needles or bleach kits	5	5
Financial assistance	6	28

Construct validity using archival data. The author of this dissertation correlated the survey data from the 2004 RWTII needs assessment in Utah with the archival data collected under the scope of this dissertation in an effort to provide convergent evidence of construct validity (Archival data, 2004; Survey data, 2004). The "usage of services" construct was the only construct assessed in this analysis because it is the only construct that is covered in the archival data. The number of services included were limited to the number of services included in the archival data (see Table 17). As mentioned before, the focus group data did not assess the full spectrum of health-related service usage so a correlation between the archival and focus group data was not possible (Focus group data, 2004).

The author of this dissertation ranked the health-related services present in the archival data based on the usage of the particular service. The ranked services from the archival data were correlated with the usage ranks associated with the particular service as defined by the survey respondents (Archival data, 2004; Survey data, 2004). The results are presented in the "Validity Assessment" section of Chapter V.

Analysis in the 2004 Needs Assessment in Utah

General analysis of the survey data. Survey responses were entered into a statistical software spreadsheet to facilitate analysis of the survey data. Descriptive statistics were completed to identify data entry errors. The survey data was cleaned and the data entry errors were corrected. The cleaned survey dataset was used in the analyses. Preliminary descriptive statistics were completed to identify any trends in the survey data. Trends were identified so that they could be used in the development of the

Table 17

Convergent Evidence of Construct Validity: Usage of Services Construct

Health-related service	Archival rank	Survey rank
Primary medical care	1	1
Food vouchers	2	5
Dental care	3	6
Case management	4	4
HIV/AIDS medications	5	3
Transportation	6	16
Help with health insurance	7	19
Vision	8	8
Mental health	9	14
Substance Abuse	10	22
Legal assistance	11	20
Emergency financial assistance	12	18
Housing	13	17

focus group questions. Focus group questions were created with the intent of providing depth and understanding of the trends observed in the survey data (UDOH, 2004b).

The project managers and the research coordinator for the 2004 RWTII needs assessment in Utah identified which results should be included in the final report based on the goals of community planning. The results were analyzed and descriptive statistics were presented according to target group. The target groups used in the analyses are the priority populations that were identified in the community planning process. The target groups and their respective *n* sizes are presented in Table 18. It is important to remember that these groups are not mutually exclusive. That means that a person could be in more than one group. For example, a person could be an IDU, a woman of color, and be under

the age of 25. The results for each target group are presented throughout the 2004 RWTII needs assessment report in Utah (UDOH, 2004b).

Estimated duplication rate in the surveys. Only 365 of the survey participants requested the $10 incentive and the duplication rate in the incentive cards was estimated at 8% (30 incentives; 15 cases), but it might be lower. There were 15 cases of incentives sent to the same address, which might suggest that a person filled the survey out twice (duplication). Another explanation is that there were two PLWH/A living at the same residence. It was not possible to estimate how many people actually filled out the survey

Table 18

Target Groups and Group Sizes

Target group	*n* size
Entire sample	425
MSM, White – White MSM	176
MSM, color – MSM from communities of color	30
IDU	28
MSM/IDU	41
Hetero, White – White heterosexuals	71
Hetero, color – Heterosexuals from communities of color	35
Men, color – Men from communities of color	60
Women, color – Women from communities of color	30
Rural – Respondents living in rural areas	38
Women, White – White women	52
Youth – Respondents who are under 25 years old	22
Prison or jail – Inmates in prison or jail	61

Note. Individuals could be in more than one group.

twice and how many residences had two PLWH/A at that particular residence. In either case, the best estimate of duplication is 8% (UDOH, 2004b).

Internal consistency of the final survey results. Internal consistency analyses were completed for the pilot survey results and the final survey results. The internal consistency of the pilot survey results is presented in the "Procedures" section of this chapter (see Table 9). The internal consistency of the final survey results is presented in Table 19. The research coordinator used Cronbach's α to assess the internal consistency of the results from each construct in the survey (UDOH, 2004b). The results in Table 19 show that the final survey results have a high level of internal consistency. See the "Reliability Assessment" section in Chapter II for an explanation of reliability and Cronbach's α.

General analysis of the focus group data. Focus group interviews were recorded and transcribed to facilitate data analysis. The focus group transcripts were entered into qualitative coding software designed to analyze qualitative data. The researcher read

Table 19

Internal Consistency: Final Survey Results

Construct	Cronbach's α
Usage of services	0.82
Accessibility of services	0.97
Client satisfaction	0.96
Importance of services	0.93
HIV prevention	0.88

Note. Results represent the internal consistency of the 425 survey responses in the sample (UDOH, 2004b).

through the data and coded it for emergent themes. The data was grouped by codes and common themes in the focus groups were identified. The common themes are presented throughout the report along with a few direct quotes from focus group participants. Examples are provided in the "Combination of Qualitative and Quantitative Methods" section of Chapter V.

CHAPTER V

RESULTS

Review of the 2004 Needs Assessment in Utah

Evidence bearing on the third goal of this dissertation is presented in this section. The 2004 RWTII needs assessment in Utah was used as a case example of improved practice to demonstrate how adequate implementation of the seven elements might improve the quality of RWTII needs assessments (UDOH, 2004b). The author compares the 2004 needs assessment in Utah (UDOH, 2004b) to the 2002 needs assessment in Utah (UDOH, 2002a) to emphasize the quality improvements resulting from adequate implementation of some of the seven elements.

General Review of the 2004 Needs Assessment

Comparing the 2002 and 2004 needs assessments. The author scored and graded the 2004 RWTII needs assessment in Utah using the same methods presented in the "Review of RWTII Needs Assessments" section of Chapter II. The results are presented in Table 20 along with the results from Table 7 pertaining to the 2002 RWTII needs assessment in Utah (UDOH, 2002a). The 2004 RWTII needs assessment in Utah (B, 88%) was one quality grade higher than the 2002 RWTII needs assessment in Utah (C, 72%). The quality of the results in 2004 had improved since 2002 due to the implementation of certain aspects of the seven elements of high quality needs assessments. Evidence supporting this statement is presented throughout the rest of this chapter.

Table 20

Review of the 2002 and 2004 RWTII Needs Assessments from Utah

Characteristic	2002 RWTII Needs Assessment in Utah (UDOH, 2002a)	2004 RWTII Needs Assessment in Utah (UDOH, 2004b)
Archival	-	-
Survey	Y	Y
Group	-	Y
Interview	-	-
Actions	Y	Y
Similarity	Y	Y
External	Y	Y
First	-	Y
Second	-	-
Stake	-	Y
First	-	-
Second	-	-
Qualitative	-	Y
Quantitative	Y	Y
Medical	Y	Y
Dental	Y	Y
Vision	Y	Y
Case	Y	Y
Housing	Y	Y
Food	Y	Y
Other	Y	Y
Barrier	Y	Y
Population	Y	Y
Sample	Y	Y
Data	Y	Y
Variable	Y	Y
Analysis	Y	Y
Score	72%	88%
Grade	C	B

Note. Scoring system, characteristics, and grades are explained in Tables 5 and 6.

The 2004 needs assessment addressed four characteristics in addition to the characteristics addressed in the 2002 needs assessment (see Table 20). The four additional characteristics addressed in the 2004 needs assessment account for the difference in quality grades between the 2004 (B, 88%) and 2002 (C, 72%) needs assessments. The four additional characteristics addressed in the 2004 needs assessment were: (a) using focus groups, which is an appropriate data collection method; (b) assessing the reliability of results from the first data collection method; (c) stakeholder involvement; and (d) using qualitative methods. The three changes in the 2004 needs assessment that accounted for addressing these characteristics were using focus groups, assessing the internal consistency of the survey results, and the creation of a needs assessment subcommittee.

The results presented above demonstrate how three relatively simple changes from 2002 to 2004 raised the quality grade approximately one grade for these needs assessments in Utah. However, this effect would not be the same for every RWTII grantee. The degree of the effect would depend on the specific deficiencies of the preceding needs assessment, assuming that each additional needs assessment within a particular RWTII jurisdiction achieved the same level of quality of the preceding needs assessment in that jurisdiction. An example is presented in the next paragraph.

If the three changes made to a new RWTII needs assessment in Kentucky were the same three changes (focus groups, reliability analysis, and a needs assessment subcommittee) implemented in the 2004 RWTII needs assessment in Utah, the effect would not be the same due to the low level of quality of the preceding RWTII needs assessment in Kentucky (Kentucky School of Public Health, 2002). The preceding needs

assessment in Utah (UDOH, 2002a) had a quality grade of a "C," with 18 out of 25 characteristics addressed, and the preceding needs assessment in Kentucky (Kentucky School of Public Health) had a quality grade of an "D," with 9 out of 25 characteristics addressed (see Table 7). If new RWTII needs assessments in each of these states achieved the same level of quality of their preceding needs assessments and they implemented the same three changes (focus groups, reliability analysis, and a needs assessment subcommittee), the effect would not be the same in each needs assessment. As mentioned before, the quality grade of the new Utah needs assessment (UDOH, 2004b) increased to a "B" because it addressed 22 out of 25 characteristics. However, the quality grade of a new Kentucky needs assessment would remain an "D" because the changes would only result in the needs assessment addressing 13 out of 25 characteristics, assuming it achieved the same quality level of the preceding needs assessment in Kentucky.

The example presented above demonstrates how the overall quality of a RWTII needs assessment depends on how well it addresses all characteristics of the seven elements of high quality needs assessments. Minor changes might substantially improve the overall quality of a needs assessment in a RWTII program that has a record of conducting needs assessments that address most of the characteristics. However, additional changes might be needed if a RWTII program has a record of conducting needs assessments that address a few of the characteristics of high quality needs assessments. RWTII needs assessments should address as many elements as possible to enhance the overall quality of the results.

The remainder of this chapter focuses on how well the 2004 RWTII needs assessment in Utah addressed the seven elements of high quality needs assessments. The author also presents potential strategies that could have been implemented in the 2004 needs assessment that would have improved the quality grade even more. However, before a discussion of the elements that were not addressed in the 2004 needs assessment can be presented, an explanation as to why they were not addressed should be presented.

Real world issues. The author of this dissertation was the research coordinator and the primary author of the report for the 2004 RWTII needs assessment in Utah (UDOH, 2004b). It might seem confusing that the research coordinator and primary author of the report would fail to adequately address all of the characteristics of the seven elements when the seven elements had already been established at the beginning of the needs assessment. The answer to this paradox pertains to real world issues. All of the seven elements of high quality needs assessments established in this dissertation can be adequately addressed assuming a researcher has unlimited time and resources. In the real world, researchers do not have unlimited time and resources.

The research coordinator for the 2004 RWTII needs assessment in Utah began the study with a plan to address each characteristic of the seven elements of high quality needs assessments (UDOH, 2004b). There seemed to be an adequate amount of time and resources to accomplish the goals set forth at the beginning of the study. However, the UDOH HIV/AIDS Treatment and Care Program faced a substantial budget shortfall once the study began.

The HIV/AIDS Treatment and Care Program anticipated an $800,000 budget shortfall in the 2004-2005 fiscal year due to an increased caseload, cost of medications,

insurance premiums, and cost of medical services (UDOH, 2004c). The HIV/AIDS Treatment and Care Program stopped accepting new clients in an effort to prevent this shortfall from getting any larger. The acting director of the UDOH Bureau of Communicable Disease Control mentioned that if the HIV/AIDS Treatment and Care Program continued to accept new clients the program would run out of money and no one would receive services (J. Brown, personal communication, August 31, 2004). This situation was not unique to Utah based on conversations the author had with project managers at the UDOH. Fourteen other states had instituted similar cost containment strategies for their RWTII programs and ten additional states were anticipating similar restrictions (J. Pond, personal communication, August 31, 2004; L. Meinor, personal communication, August 31, 2004; UDOH, 2004c). The frozen resources and the chain reaction effect the budget shortfall had on the time allowed for the 2004 RWTII needs assessment in Utah prevented the research coordinator from addressing all of the characteristics of the seven elements.

In sum, RWTII programs live in the land of diminishing funds (R. D'Andrea, personal communication, September 7, 2004). RWTII researchers do not have access to unlimited time and resources. The limitation on time and resources has the potential to influence the degree to which a RWTII needs assessment addresses each characteristic of the seven elements. However, there is room for improvement even in limited resource situations based on the results in Table 7 and the progress demonstrated in Table 20.

The Seven Elements and the 2004 Utah Needs Assessment

The author assessed how well the 2004 RWTII needs assessment in Utah addressed the characteristics of each element and identified potential improvements that might be made in addressing the elements. Potential consequences of failing to adequately address each element are also presented. Evidence bearing on the third objective of this dissertation is presented in this section.

Appropriate Data Collection Methods

How did they address this element? At the beginning of the study, the research coordinator for the 2004 RWTII needs assessment in Utah planned to use all four of the appropriate data collection methods identified in Table 4 (UDOH, 2004b). The survey and focus groups were supposed to be launched during the first phase of data collection and the archival research and interviews were supposed to be launched during the second phase of data collection. News of the budget shortfall (UDOH, 2004c) came after the first phase of data collection had started but before the second phase of data collection began. The UDOH Bureau of Communicable Disease Control froze any expansion of the study once the budget shortfall was disclosed (J. Brown, personal communication, August 31, 2004). This information helps explain why additional methods were not included in the 2004 RWTII needs assessment in Utah.

The 2004 RWTII needs assessment in Utah used two of the top four data collection methods for RWTII needs assessments (UDOH, 2004b) and the results are summarized in Table 20. This element requires that a RWTII program use a minimum of two methods that are considered to be appropriate data collection methods for a RWTII

needs assessment. Given these parameters, the 2004 RWTII needs assessment in Utah adequately addressed all of the characteristics of the "appropriate data collection methods" element.

Adding focus groups to the design of the 2004 needs assessment in Utah (UDOH, 2004b) is one example of the improvements made since the 2002 needs assessment in Utah (UDOH, 2002a). Focus groups were not included in the 2002 needs assessment in Utah. As mentioned before, adding focus groups to the design also contributed to addressing the "qualitative method" characteristic of the "Qualitative and Quantitative Methods" element (see Table 20).

What improvements might be made? While the 2004 RWTII needs assessment in Utah did meet the minimum requirements of this element, including an additional appropriate data collection method would have been a potential improvement. As mentioned before, the author of this dissertation collected archival data under the scope of this dissertation in an effort to assess the contributions of this potential change (Archival data, 2004). Simply collecting archival data would have increased the quality grade of the 2004 needs assessment from a "B" (22 out of 25 characteristics addressed) to an "A" (23 out of 25 characteristics addressed) because archival research is an appropriate data collection method for RWTII needs assessments (see Table 3). This does not include the additional contributions the archival data might have had in the "reliability assessment" and "validity assessment" elements. These results are presented in their respective sections.

Potential consequences of not adequately addressing this element. The research coordinator and the project managers of the 2004 RWTII needs assessment in Utah used

the five criteria for selecting appropriate data collection methods to select methods for their study (see the "Appropriate Data Collection Methods" section in Chapter II for a description of the five criteria). The research coordinator obtained information from all needs assessment participants, through the appropriate data collection methods, about sensitive subjects such as risk behaviors and protection use (Focus group data, 2004; Survey data, 2004). Failure to use appropriate data collection methods might have prevented the research coordinator from obtaining this type of information. For example, survey participants were asked about different sexual behaviors (oral sex, anal sex, and vaginal sex) and whether or not they used protection when engaged as the receiving or inserting partner in the particular behavior (Survey data, 2004). Focus group participants were asked to provide details about sex parties and methamphetamine use (Focus group data, 2004). A sex party is a social gathering, lasting over one or more nights, at which people can have sex with one or more partners (UDOH, 2004b). Focus group participants characterized sex parties as the most likely place to find people having sex with anonymous partners without protection under the influence of methamphetamine (Focus group data, 2004). Obtaining information about these sensitive subjects might have been difficult if data collection methods that were inappropriate in the context of RWTII needs assessments were used.

A case study is one of the data collection methods that was judged inappropriate, in the context of a RWTII needs assessment (see Table 3). Case studies are in-depth studies of cases, of which are defined by the researcher (Gall et al., 2003). The most likely unit of study in a RWTII needs assessment case study would probably be a person living with HIV/AIDS. In a case study, asking in-depth questions about an individual's

patterns of protection use as the receiving or inserting partner in oral, anal, or vaginal sex might be intrusive and cause stress for the participant. Focus groups minimize these threats because participants can be less inhibited because they trust each other due to similar experiences (Amos et al., 2004; Meade et al., 2003). Surveys minimize these threats because, if the survey is designed correctly, anonymity is maintained and the participant might see it as less threatening (Lockyer, 1998).

The example presented above is one of many scenarios a researcher might encounter when using methods that are inappropriate for RWTII needs assessments. It is important to use appropriate data collection methods so that challenges arising from inappropriate methods, such as the example presented above, might be avoided. However, the importance of appropriate data collection methods does not depend exclusively on the avoidance of problems associated with inappropriate methods. Appropriate data collection methods generate data that helps build confidence in the results and they also contribute to the "validity assessment" element. The contribution to the assessment of validity is presented later in this chapter.

Representative Sample

How did they address this element? The 2004 RWTII needs assessment in Utah adequately addressed all characteristics associated with this element (see Table 20). Addressing the characteristics in the "representative sample" element did not contribute to the improvements made in the 2004 needs assessment (UDOH, 2004b) as compared to the 2002 needs assessment in Utah (UDOH, 2002a). The 2004 and 2002 needs assessments both adequately addressed the characteristics of this element.

The research coordinator in the 2004 RWTII needs assessment in Utah took deliberate actions to achieve a representative sample by using proportional stratified convenience sampling and a sample frame (see the "Representative Sample" section of Chapter II for a description of these concepts). Similarities between the sample and the population were assessed throughout the study. The author of the 2004 RWTII needs assessment report also discussed the external validity of the results and the limits of generalization (UDOH, 2004b). Descriptions of how the characteristics of the "representative sample" element were addressed in the 2004 RWTII needs assessment in Utah are presented in the next two sections.

Deliberate actions and assessing similarities. The research coordinator in the 2004 RWTII needs assessment in Utah strived to mirror the percentages in the population using a proportional stratified convenience sampling technique for the survey. The author of the needs assessment report detailed the deliberate actions the research coordinator took to improve the likelihood of achieving a representative survey sample. A survey sample frame was created to help guide the sampling process (see Table 21). A sample frame was not created for the focus groups because the purpose of the focus groups was to allow the research coordinator to probe deeper into the data as opposed to creating generalizable results (UDOH, 2004b).

The first step in creating a sample frame for the 2004 RWTII needs assessment in Utah was to identify the percentages in the PLWH/A population in Utah. The percentages in the "target sample" column directly reflect the percentages of the PLWH/A population in Utah as of December 31, 2003 (UDOH, 2004a). The *n* sizes in the target sample column represent the target number of PLWH/A within each subgroup

Table 21

Survey Sample Frame

	Target sample		2004 NA survey		
Subgroups	*n* size	Percents	*n* size	Percents	Difference %
Exposure Category					
MSM	247	58.2	212	49.9	-8.3
IDU	61	14.2	28	6.6	-7.7
MSM/IDU	39	9.3	41	9.6	0.4
Heterosexuals	41	9.7	114	26.8	17.2
Other	11	2.5	14	3.3	0.8
Not reported	26	6.2	16	3.8	-2.4
Race/Ethnicity					
White, not Hispanic	320	75.4	318	74.8	-0.6
Black, not Hispanic	29	6.8	29	6.8	0.1
Hispanic	64	15.0	52	12.2	-2.7
Asian/Pacific Islander	5	1.1	2	0.5	-0.7
Am. Indian/Alaska Native	5	1.3	10	2.4	1.1
Multi-Race	0	0.0	7	1.6	1.6
Unknown	2	0.5	7	1.6	1.2
Gender					
Male	361	85.0	336	79.1	-5.9
Female	64	15.0	85	20.0	5.0
Transgender	0	0.0	3	0.7	0.7
Unknown	0	0.0	1	0.2	0.2
Age at the End of 2004					
0-12	4	1.0	1	0.2	-0.8
13-19	2	0.4	2	0.5	0.1
20-29	46	10.8	56	13.2	2.4
30-39	137	32.4	113	26.6	-5.8
40-49	164	38.6	186	43.8	5.2
50+	72	17.0	65	15.3	-1.7
Unknown	0	0.0	2	0.5	0.5
n size and percent total	425	100.0	425	100.0	

Note. "Target sample" derived from UDOH, 2004a, 2004b. "2004 NA survey" derived from Survey data, 2004. Discrepancies are due to rounding.

that should be present within a sample of 425 PLWH/A that is representative of the PLWH/A population in Utah. The *n* sizes in the target sample column are calculated by multiplying the percentages in the target sample column by the survey sample *n* size of 425. The *n* sizes and percentages in the "2004 NA survey" column are the results representing the survey participants in the 2004 RWTII needs assessment in Utah. The "difference %" column is the difference between the target sample percentages and the 2004 NA survey percentages (UDOH, 2004b). In other words, it is the difference between "what should be" (target sample percentages) and "what was" (2004 NA survey percentages).

The subgroups used in the survey sample frame represent the standard subgroups used in CDC and UDOH reporting (UDOH, 2004a). Gall et al. (2003) suggested that the sample should be compared to the population on as many key characteristics as possible. The subgroups listed in Table 21 represent the complete list of key characteristics that could be compared between the sample results (Survey data, 2004) and the PLWH/A population in Utah (UDOH, 2004a). The MSM, IDU, and men who have sex with men who also use injecting drugs (MSM/IDU) categories have been abbreviated using the standard abbreviations used in CDC and UDOH reporting (UDOH, 2004a).

The target sample columns in the survey sample frame (see Table 21) were created before data collection began in an effort to help guide the proportional stratified convenience sampling technique. The research coordinator for the 2004 RWTII needs assessment in Utah took deliberate actions to make sure each subgroup in the sample was appropriately represented. Survey participants were selected from across the RWTII jurisdiction in Utah. Periodic checks of the sample frame during data collection guided

the selection of additional cases (UDOH, 2004b). For example, if the sample frame indicated that more MSM were needed in the sample, the research coordinator would focus selection on MSM in an effort to improve the representation in that particular group.

The research coordinator assessed the similarities between the sample and the population throughout the study. The final assessment of the similarities was completed at the end of data collection as part of the assessment of the representative characteristics of the sample. The largest example of misrepresentation appeared to be in the heterosexual category (17.2%). This means that there were too many heterosexuals in the sample, which might compromise the representative characteristics of the sample.

The author of the 2004 RWTII needs assessment report in Utah suggests that the lack of proper representation in the heterosexual subgroup is a direct result of problems with the reporting system for HIV/AIDS throughout the country (UDOH, 2004b). The target sample percentages were derived from the HIV/AIDS Surveillance Program, under the UDOH Bureau of Communicable Disease Control. The HIV/AIDS Surveillance Program uses the HARS database, which is the standard HIV/AIDS reporting system throughout the country (UDOH, 2004a). The HARS system describes the exposure category of PLWH/A at the time of diagnosis and other basic demographic characteristics of PLWH/A in the database. The 2004 NA survey percentages in Table 21 describe the current exposure category of PLWH/A. Finding substantial differences between HARS descriptions of exposure categories and current descriptions of exposure categories is quite common due the possibility of changes that may occur between the two measurements (UDOH, 2004b). For example, a person might have been an IDU at the

time of diagnosis but has stopped using injecting drugs since that time. In this scenario, the HARS system would identify that person as an IDU, but the current data would identify that person as a heterosexual if the person does not fall under one of the other exposure categories.

Current measures of exposure categories can be more accurate than HARS descriptions of exposure categories due to the fact that HARS measures occurred in the past and current measures occur in the present. This assumption is based on conversations the author has had with the program managers of the UDOH HIV Prevention Program (L. Meinor, personal communication, January 11, 2005) and the UDOH HIV/AIDS Treatment and Care Program (J. Pond, personal communication, January 11, 2005). The acting director of the UDOH Bureau of Communicable Disease Control (J. Brown, personal communication, January 11, 2005) and the acting director of the UDOH Division of Epidemiology and Laboratory Services (T. Garrett, personal communication, January 11, 2005) also support this assumption.

Evidence supporting this assumption can be found in Table 21. The author of the 2004 RWTII needs assessment report in Utah suggests that the representative characteristics of the sample in the race/ethnicity, gender, and age subgroups are relatively good. It seems unlikely that the sample would be representative of the population on all but one of the four key characteristics. The three key characteristics where the sample is representative of the population are the three key characteristics that are not influenced by changes over time. However, exposure category can change over time and that is the only characteristic where the sample has such a lack of representation based on the HARS data. Based on this evidence, the author of the 2004 RWTII needs

assessment report in Utah suggests that the sample is representative of the population and that the exposure category distribution in the sample is more accurate that the HARS data (UDOH, 2004b). The UDOH HIV Prevention Program manager (L. Meinor, personal communication, January 11, 2005), the UDOH HIV/AIDS Treatment and Care Program manager (J. Pond, personal communication, January 11, 2005), the acting director of the UDOH Bureau of Communicable Disease Control (J. Brown, personal communication, January 11, 2005), and the acting director of the UDOH Division of Epidemiology and Laboratory Services (T. Garrett, personal communication, January 11, 2005) support this conclusion.

Identifying the limits of the generalization. The author of the 2004 RWTII needs assessment report in Utah addressed the external validity of the results and the limits of the generalization. The author of the report estimated that the survey sample was representative of the PLWH/A population in Utah so appropriate generalizations might be made from the survey results to the target population. The PLWH/A population in Utah was the target of generalization from the beginning of the study and the research coordinator for the 2004 RWTII needs assessment took deliberate actions to create a sample that represented that population. The author of the 2004 RWTII needs assessment report suggested that all of the key characteristics listed in the sample frame were relevant to the generalization because different subgroups in the sample demonstrated different needs. The author of the report also estimated that the overall results from the needs assessment are a direct result of the composition of subgroups and the health-related service delivery systems in Utah (UDOH, 2004b).

What improvements might be made? The 2004 RWTII needs assessment in Utah adequately addressed all of the characteristics of the "representative sample" element, however, an additional sample frame for the archival data might have been needed if archival data would have been collected. The author of this dissertation was able to collect archival data after the 2004 RWTII needs assessment in Utah was completed (Archival data, 2004) so an archival data sample frame should be completed to assess the similarities between the archival data and the PLWH/A population in Utah.

The author of this dissertation collected health-related service usage information on every case in the Ryan White database (Archival data, 2004) and a sample frame was used to assess the similarities between the archival sample and the PLWH/A population in Utah (see Table 22). The sample frame did not guide the selection process because every possible case in the archival database was selected. The archival sample frame is presented in Table 22 and the columns are similar to the columns in Table 21. The only exception is that the Archival data columns replaced the 2004 NA survey columns. The calculations in Table 22 are the same as the calculations in Table 21. The subgroups listed in Table 22 represent the complete list of key characteristics that could be compared between the archival sample results (Archival data, 2004) and the PLWH/A population in Utah (UDOH, 2004a).

The author of this dissertation estimates that the archival sample frame is representative of the PLWH/A population in Utah and that the same limits of generalization that applied to the survey apply to the archival data. The gender distribution in the archival sample almost perfectly matches the gender distribution in the PLWH/A population in Utah. The largest lack of representation occurred in the white,

Table 22

Archival Sample Frame

	Target sample		Archival data		
Subgroups	*n* size	Percents	*n* size	Percents	Difference %
Race/Ethnicity					
White, not Hispanic	586	75.4	535	68.9	-6.6
Black, not Hispanic	53	6.8	71	9.1	2.3
Hispanic	116	14.9	121	15.6	0.6
Asian/Pacific Islander	9	1.2	8	1.0	-0.1
Am. Indian/Alaska Native	10	1.3	14	1.8	0.5
Multi-Race	0	0.0	0	0.0	0.0
Unknown	4	0.5	28	3.6	3.1
Gender					
Male	660	84.9	649	83.5	-1.4
Female	117	15.1	128	16.5	1.4
Transgender	0	0.0	0	0.0	0.0
n size and percent total	777	100.0	777	100.0	

Note. "Target sample" derived from UDOH, 2004a, 2004b. "Archival data" derived from Archival data, 2004. Discrepancies are due to rounding.

non-Hispanic group but there is also a higher number of individuals in the "unknown" race/ethnicity category. The author of this dissertation estimates that around 70% of the individuals in the "unknown" status category are White, non-Hispanic, which would decrease the lack of representation in the White, non-Hispanic category to about 3.9%. This assumption is based on the expectation that the distribution observed in the sample is the same as the distribution observed in the "unknown" category. The unknown category consists of individuals who did not indicate their race/ethnicity or their

race/ethnicity was not entered in the Ryan White database due to a data entry error. Knowledge about the unknown category was gained through conversations the author had with HIV/AIDS Treatment and Care Program staff who manage the system (K. Parker, personal communication, August 31, 2004).

Potential consequences of not adequately addressing this element. A representative sample is a prerequisite for making meaningful generalizations from the sample to the population. Representative samples also enhance our confidence in the accuracy of the results. A key premise in Chapter I was that a needs assessment should provide the best possible description of health-related service needs because of the integral part it plays in the community planning and resource allocation process. Poor needs assessment data have the potential to have far-reaching detrimental effects on PLWH/A. Failure to accurately identify the services required and the resources available might result in PLWH/A going without primary medical care, life-extending drug treatments, or other important health-related services. Failure to adequately address the representative sample element is one example of how this might occur.

An example of how the representative characteristics of a sample might influence community planning and resource allocation can be framed within the context of the 2004 RWTII needs assessment (Focus group data, 2004; Survey data, 2004). The survey sample was labeled as representative of the PLWH/A population in Utah, which provides an opportunity to make meaningful generalizations from the survey data to this population. However, the focus group sample was not representative of the PLWH/A population in Utah (UDOH, 2004b). Specific data examples of how the resource

allocation process might have resulted in poor resource allocation decisions are presented in the following paragraphs.

The focus group sample (n = 33) consisted of 20 MSM (61%), 1 MSM/IDU (3%), and 12 heterosexuals (36%). The race/ethnicity breakdown was 28 White non-Hispanics (85%), 2 Black non-Hispanics (6%), 2 American Indian/Alaska Natives (6%), and 1 person (3%) who identified as multiracial (UDOH, 2004b). The percentages in these subgroups within the PLWH/A population in Utah were already described in Table 21 under the Target Sample Percents column, so they will not be duplicated here. The focus group sample is not representative of the PLWH/A population in Utah based on the assessment of similarities between these two groups. Additionally, the small sample sizes inflate the percentages and introduce the potential for error in the results. The focus group results should not be generalized to the PLWH/A population in Utah (UDOH, 2004b).

Focus group participants identified HIV/AIDS medications and food certificates as their "most needed" services. The research coordinator for the 2004 RWTII needs assessment in Utah identified these needs through coding the qualitative data and identifying emergent themes. This qualitative data analysis technique does not include a quantitative component so the results are simply listed as the most common themes (UDOH, 2004b). Based exclusively on the focus group results, community planners would have been told that PLWH/A need HIV/AIDS medications and food certificates and that other needs were not identified.

Survey participants identified their level of need for the 26 health-related services (see Table 14 for a list of services) listed in the survey and enough data was collected to

rank these service needs. The top five needs identified in the survey data, along with the percentage of the survey sample that indicated a need for the service are: (a) doctor visits for HIV/AIDS (88.2%), (b) CD4 count or viral load test (84.9%), (c) HIV/AIDS medications (76.0%), (d) case management (70.4%), and (e) food vouchers (69.4%). Community planners would have been given a list of 26 ranked service needs from the survey data, as compared to two service needs from the focus group data (Focus group data, 2004; Survey data, 2004; UDOH, 2004b).

There are many conclusions that can be drawn from the example presented above and some of these conclusions are described in other sections in this chapter. Conclusions associated with these elements are presented with their corresponding section in this chapter. In this section, the author focuses on conclusions that might be drawn from the example above, as they relate to the representative sample element.

One conclusion that might be drawn from the example presented above is that poor representation due to small sample size introduced error into the focus group results. A possible explanation of the focus group results is that the 33 individuals that chose to participate in the focus groups were unique individuals in the PLWH/A population that only had two service needs. If more focus groups were conducted, the researcher might have found more service needs. The representative survey sample helps build confidence in the survey results because each subgroup within the population is adequately represented.

It is important to note that adequate representation within a particular sample is not enough to improve the accuracy of the results by itself. The author of this dissertation has repeatedly emphasized the interconnectivity of the seven elements. Each

element contributes to the accuracy of the results and the quality of the needs assessment. Individual element contributions towards quality and accuracy are suspect when examined individually. Integrating the quality and accuracy contributions from all of the seven elements helps build confidence in the results and each element helps validate the contributions of every other element. Evidence supporting this view is presented in the following sections.

Reliability Assessment

How did they address this element? The 2004 RWTII needs assessment in Utah adequately addressed one of the two characteristics of the reliability assessment element and the results are summarized in Table 20. Addressing one of the characteristics of this element is another example of what accounted for the difference between the 2002 and 2004 needs assessments in Utah. The 2002 needs assessment did not include any reliability assessment (UDOH, 2002a), whereas the 2004 needs assessment assessed and reported the internal consistency of the survey results (UDOH, 2004b).

What improvements might be made? A potential improvement in addressing this element would have been assessing the reliability of the focus group data. If the archival data would have been collected under the scope of the 2004 needs assessment, determining the reliability of the archival data would have been another potential improvement (Archival data, 2004). Assessing the reliability of the focus group results would have increased the quality grade of the 2004 needs assessment from a "B" (22 out of 25 characteristics addressed) to an "A" (23 out of 25 characteristics addressed), assuming no archival data was collected. If archival data was collected and the reliability

of the archival results was assessed, the quality grade of the 2004 needs assessment would have increased from a "B" (22 out of 25 characteristics addressed) to an "A" (24 out of 25 characteristics addressed) due to the benefits this change would have on addressing the appropriate data collection methods and representative sample elements (see Table 20).

One way to assess the reliability of these results is through the validity assessment. As mentioned before, results cannot be valid without being reliable, but they can be reliable without being valid. Valid inferences cannot be made from results with zero reliability because results with zero reliability are mostly measurement error. The relationship between reliability and validity allows researchers to indirectly show that results are reliable by showing that they are valid (Moss, 1994). In some cases, if results have evidence of validity, then the researcher can assume the results are reliable because reliability is a prerequisite for validity. The validity assessment of these data sources are presented in the next section, so examples will not be presented here. It is important to remember that if the results are estimated to be valid, a researcher can assume that the results are also reliable.

Another way to build confidence in the reliability of RWTII needs assessment results is to examine results from past needs assessments. For example, the top five needs in the 2002 needs assessment survey sample were: (a) doctor visits for HIV/AIDS (83.9%), (b) CD4 count or viral load test (81.0%), (c) HIV/AIDS medications (66.3%), (d) information of treatment for HIV/AIDS (53.5%), and (e) help taking medications and dealing with side effects (44.7%). As mentioned before, the top five needs in the 2004 needs assessment survey sample were: (a) doctor visits for HIV/AIDS (88.2%), (b) CD4

count or viral load test (84.9%), (c) HIV/AIDS medications (76.0%), (d) case management (70.4%), and (e) food vouchers (69.4%). Comparing the results between these two needs assessments is a rendering of the test-retest procedure. While the surveys are not parallel forms, looking at the results in a test-retest context might be helpful. However, the operational definition of need was different in the two needs assessments, so statistical comparison between the two needs assessments was not completed.

Potential consequences of not adequately addressing this element. Failure to adequately address the reliability assessment element is particularly important if a researcher fails to adequately address the validity assessment element as well. While assessing reliability indirectly through the validity assessment is not the best option, it is better than no reliability assessment at all. The author asserts that the gold standard is to complete a reliability assessment and a validity assessment of the results.

As mentioned before, the contributions of a single element are not enough to build our confidence in the results. The same is true for the reliability assessment element. A reliability assessment can help build confidence in the quality and accuracy of the results when combined with the other elements of a high quality needs assessment.

In classical test theory, the reliability of a test refers to how much measurement error is present in the results. Failure to assess the reliability of the results prevents anyone reading the report of findings from determining how much measurement error might be in the results. The internal consistency of the survey results presented in Table 19 demonstrates that there is little difference between the true score and the observed

score in the 2004 needs assessment survey results. Without these coefficients, a reader might have difficulty determining how reliable the results really are.

Validity Assessment

How did they address this element? The 2004 RWTII needs assessment in Utah adequately addressed one of the three characteristics of the validity assessment element, and the results are summarized in Table 20. This is another example of what accounted for the difference between the 2002 and 2004 needs assessments in Utah. The research coordinator for the 2004 RWTII needs assessment in Utah used a needs assessment subcommittee to help guide the needs assessment process. The needs assessment subcommittee consisted of HIV/AIDS advocates, health-related service providers, public health professionals, and PLWH/A in Utah. The needs assessment subcommittee assessed the face validity of the survey and the focus group questions used in the 2004 RWTII needs assessment (UDOH, 2004b).

The validity of the results from the survey and the focus groups was not adequately assessed in the RWTII needs assessment in Utah. The author of the needs assessment report alludes to convergent evidence of construct validity throughout the report, but a definitive presentation of the validity of the results cannot be found. For example, results from the survey and focus groups are interfused throughout the report and the author of the report occasionally makes short statements that explain that the focus group data support the survey data, and vice versa. Specific examples are given in the next section. The combination of all of these short statements provides convergent evidence of construct validity to a certain extent, but the statements are sporadically

placed throughout the results. A reader might not pick up on the convergent evidence given the length and format of the report. The 2004 RWTII needs assessment report is 136 pages long with a majority of the report in single spaced 10-point font (UDOH, 2004b). The likelihood of someone reading the entire report is also relatively low based on conversations the author has had with staff at the UDOH (J. Brown, personal communication, August 31, 2004).

With the above mentioned considerations in mind, the author took the standpoint that the 2004 RWTII needs assessment did not adequately address two of the three characteristics of the validity assessment element. Other researchers might disagree with this standpoint and argue that convergent evidence is convergent evidence, no matter how or where it is presented in the report. The author of this dissertation agrees that convergent evidence is convergent evidence, but stands by the position that the validity assessment element might have been better addressed if the convergent evidence was more obvious. Suggested improvements are presented in the next section.

What improvements might be made? As mentioned before, the 2004 RWTII needs assessment in Utah should have included a more explicit analysis of validity, or at a minimum, explained how the convergent evidence was going to be presented throughout the report. While statements pertaining to convergent evidence of construct validity are beneficial, quantifying the relationship between the data sources might have proved more useful. Potential approaches to addressing these issues are presented in the following paragraphs. The methodology associated with each of the following validity assessments is presented in the Analysis section of Chapter IV.

The author of this dissertation correlated the survey data and the focus group data from the 2004 RWTII needs assessment in Utah in an effort to provide convergent evidence of construct validity (Focus group data, 2004; Survey data, 2004). The "HIV prevention service needs" construct was the only comparable construct between the two data sources because the other constructs (see Table 19) had limited ranges in the focus group data (UDOH, 2004b). The ranked HIV prevention service themes from the focus groups were correlated with the number of survey responses associated with each theme (see Table 16). The results from this correlation, (r_s (6) = 0.72; r_s^2 = 0.52; p = 0.052), provide convergent evidence that the results have good construct validity on the HIV prevention service needs construct. As mentioned before, the contribution of a single element towards the accuracy of needs assessment results is not enough by itself. The element's contributions should be combined with the contributions of the other six elements to help build our confidence in the results. This assertion might be loosely applied to the validity assessment element as well. While the correlation results in Table 16 address the minimum requirements of all three characteristics of the validity assessment element, additional assessments of validity might provide additional support for the validity of the results.

The validation between data sources presented above would have increased the quality grade of the 2004 needs assessment from a "B" (22 out of 25 characteristics addressed) to an "A" (25 out of 25 characteristics addressed) because the validity of both methods were assessed and the researcher can assume that the results are reliable (see Table 20). This is an example of how the reliability of the focus group results could be

assessed through the validity assessment of the two data collection methods. Results cannot be valid without being reliable.

In addition to the results presented in the paragraphs above, including a third data collection method is helpful in building additional confidence in the validity of the results generated from each data collection method. There were only two data collection methods used in the 2004 RWTII needs assessment in Utah, which limits the validation between methods. Validation between two methods is beneficial, but a third method can bolster the credibility of the initial validation if the results from the third method also demonstrate evidence of validity. As mentioned before, the author of this dissertation collected archival data after the RWTII needs assessment in Utah was completed. This data source might provide additional evidence of the construct validity of the results from the previous two methods.

The author of this dissertation correlated the survey data from the 2004 RWTII needs assessment in Utah with the archival data collected under the scope of this dissertation in an effort to provide convergent evidence of construct validity (Archival data, 2004; Survey data, 2004). The usage of services construct was the only construct assessed in this analysis because it is the only construct that is covered in the archival data. As mentioned before, the focus group data did not assess the full spectrum of health-related service usage so a correlation between the archival and focus group data was not possible (Focus group data, 2004). The ranked services from the archival data were correlated with the usage ranks associated with the particular service as defined by the survey respondents (see Table 17). The results, $r_s\,(12) = 0.80$, $r_s^{\,2} = 0.64$, $p = 0.001$,

provide convergent evidence that the results have good construct validity on the usage of services construct.

In sum, the assessment of construct validity between the first two methods (see Table 16) is beneficial, but the additional assessment of construct validity in Table 17 provides further credibility to the validity of the results. Quantitative analyses of validity, such as those presented in Tables 13 and 14, also help build confidence in qualitative assertions of validity. As mentioned before, the author of the 2004 RWTII needs assessment report in Utah included qualitative statements alluding to convergent evidence of construct validity throughout the results section of the report. For example, almost twice the number of survey participants ($n = 50$) identified methamphetamine as the drug of choice for sex under the influence as compared to the number who identified cocaine ($n = 26$). A common theme in the focus groups was that methamphetamine was the most popular drug for sex under the influence (UDOH, 2004b). Examples similar to this one provide convergent evidence of construct validity although the evidence might be suspect as a stand-alone method for a validity assessment.

Potential consequences of not adequately addressing this element. The potential consequences of failing to adequately address the validity assessment element was introduced in the Representative Sample section of this chapter. The example presented in that section showed how data that is not validated might lead to poor resource allocation decisions. For example, focus group participants identified HIV/AIDS medications and food certificates as their most needed services (Archival data, 2004). Community planners might have allocated resources primarily to these two service categories, assuming they did not have any other data sources to inform their decision.

Survey participants identified their level of need for the 26 health-related services listed in the survey (see Table 14 for a list of services) and enough data was collected to rank these service needs. Community planners might have allocated resources according to the rank associated with each service, assuming they agreed that the survey sample was a better representation of the PLWH/A population in Utah. However, if the validity of the results has not been assessed, the results still might be suspect even though a representative sample has been achieved. As mentioned before, a single element's contribution towards accuracy is enhanced when combined with the other six elements' contributions towards accuracy.

Combination of Qualitative and Quantitative Methods

How did they address this element? The 2004 RWTII needs assessment in Utah adequately addressed the characteristics of the "combination of qualitative and quantitative methods" element and the results are summarized in Table 20. Addressing this element is another example of what accounted for the difference in quality grades between the 2002 and 2004 needs assessments. The survey helped the RWTII program in Utah generate results that might be generalized to the entire PLWH/A population in Utah (Survey data, 2004). The focus groups allowed the research coordinator for the 2004 RWTII needs assessment in Utah to probe deeper and add context to the survey results (Focus group data, 2004). An example of the complementary relationship between the two data collection methods is presented in the following paragraphs.

A key finding in the survey data (2004) was that PLWH/A in the sample did not feel like they needed HIV prevention services. The number of survey respondents that

felt like they did not need HIV prevention services (n = 147) outnumbered all other responses pertaining to HIV prevention service needs combined (n = 112). The other responses to the HIV prevention service needs question included indications of need for condoms or lubrication (n = 40), financial assistance (n = 28), HIV prevention education (n = 23), mental health services (n = 16), and clean needles or bleach kits (n = 5). The survey data did not provide an explanation of the results observed.

The focus groups provided a way for the research coordinator in the 2004 RWTII needs assessment to probe deeper and add context to the survey results. Individuals in the focus groups were asked to identify what HIV services they needed. When individuals indicated that they did not need HIV prevention services, the research coordinator asked the participants to explain their answer. Focus group participants were quoted as saying "I don't really pay attention to (HIV) prevention anymore, because it's too late . . . The horse has already left the barn" and "I don't need (HIV) prevention services, the damage is done" (UDOH, 2004b, p. 21). The research coordinator asked focus group participants why they thought that their responsibility for stopping the spread of HIV changed once they became HIV positive. One focus group participant said, "I'm already (HIV) positive. It is an (HIV) negative person's responsibility to make sure that he doesn't get HIV. If a person is negative and he wants to stay negative, he should be using condoms to protect himself" (UDOH, 2004b, p. 40). Other individuals in the focus group explained that expecting a person to use protection is not realistic in many sexual situations, especially sex parties. Focus group participants explained that sex parties are becoming very popular and they are characterized by a low level of protection use, anonymous sex, and sex under the influence of methamphetamine (UDOH, 2004b).

Another participant said "For me, the last thing I want to get into at that moment when you're suppose to be getting sensual and intimate is to start a discussion (about protection)" (UDOH, 2004b, p. 40).

What improvements might be made? As mentioned before, adding appropriate data collection methods to the design might have provided additional benefits pertaining to the validity assessment and appropriate data collection methods elements. However, the two methods used in the 2004 RWTII needs assessment in Utah seemed to address the characteristics of the combination of qualitative and quantitative methods element very well. This is an example of how addressing the characteristics of a single element cannot ensure the overall quality of the needs assessment. For example, a needs assessment might address the combination of qualitative and quantitative methods element extremely well, but the data are still poor due to lack luster performance in other elements such as the representative sample and reliability assessment elements. RWTII programs should adequately implement all characteristics of the seven elements of high quality needs assessment in order to experience the full benefits of conducting a high quality needs assessment.

Potential consequences of not adequately addressing this element. The research coordinator and the project managers of the 2004 RWTII needs assessment in Utah felt that a focus group setting would be the best setting for asking open-ended questions because participants would be able to elaborate and explain their responses (UDOH, 2004b). Results from the survey and focus group data bear evidence supporting this assumption. For example, there were three open-ended questions on the survey and an estimated 80 - 90% of the approximately 250 responses to those questions were no more

than five words long, even though there was enough room to write a longer response (Survey data, 2004). In contrast, focus group discussions on a single question about barriers to services lasted an average of 30 minutes and generated an average of 10 pages of single spaced transcripts (Focus group data, 2004). Additionally, approximately 175 survey respondents skipped the open-ended questions all together (survey data). It should be noted that simply adding qualitative questions to a quantitative survey does not constitute a combination of methods. As mentioned before, the combination of methods element is concerned with using two or more data collection methods that generate both qualitative and quantitative data.

The results presented above provide an opportunity to imagine the potential consequences of failing to adequately address the combination of qualitative and quantitative methods element. Qualitative and quantitative methods generate different kinds of data, which might serve different purposes within a RWTII needs assessment. Subscribing exclusively to one category of methods severely limits the data collection possibilities. In the two examples mentioned above, the survey data generated numerical data that might be generalized to the target population, but it was challenging to provide context or explanations of the results observed. The focus group data produced ample explanations and context, but might fail to provide the numerical data that can be useful in resource allocation. Achieving an equal balance between qualitative and quantitative methods can be beneficial, as demonstrated in this section.

Comprehensive Assessment

How did they address this element? The 2004 RWTII needs assessment in Utah adequately addressed the characteristics of the comprehensive assessment element and the results are summarized in Table 20. HRSA stipulates that a comprehensive RWTII needs assessment should assess the health-related service needs among PLWH/A in the program's jurisdiction, including an assessment of the barriers that prevent PLWH/A from receiving services. Assessing the health-related service needs should encompass the full spectrum of services offered to PLWH/A within the jurisdiction (HRSA, 1996, 1998, 2002a, 2002b). The 2004 needs assessment survey was the primary data source for the health-related service needs and the focus groups were the primary data source for the barriers that prevent PLWH/A from receiving services (UDOH, 2004b).

Potential consequences of not adequately addressing this element. Failure to represent the needs of a PLWH/A population, across the full spectrum of services, is the main consequence of failing to adequately address this element. For example, if a RWTII needs assessment focuses exclusively on the medical service needs of a PLWH/A population, individuals within that particular population are never given the opportunity to express their need for other health-related services. In this scenario, community planners might be led to believe that medical service needs are the only needs that exist within the particular population assessed. Another possible scenario is that community planners know that PLWH/A need other services as well, but they cannot quantify those needs as part of an effort to effectively allocate resources. Assessing the full spectrum of health-related service needs, including an assessment of the barriers that prevent

PLWH/A from obtaining those services, is a vital part of contributing to the accuracy of RWTII needs assessment results.

Methods That Allow Reasonable Replication

How did they address this element? The 2004 RWTII needs assessment in Utah adequately addressed all of the characteristics of the methods that allow reasonable replication element and the results are summarized in Table 20. Much of the evidence bearing on how well the 2004 needs assessment addressed this element has already been presented in Chapter IV. The evidence presented in Chapter IV describes the methods section of the 2004 RWTII needs assessment in Utah (UDOH, 2004b). The only section of the 2004 needs assessment's methodology section that was not presented in Chapter IV was the discussion of the generalizability of the results. This information is presented in the next section.

Generalizability of the results. The author of the 2004 RWTII needs assessment report in Utah presented a review of literature that is similar to the review of literature in the Representative Sample section of Chapter II so it will not be duplicated here. The author of the 2004 RWTII needs assessment report in Utah also presented an explanation of the survey sample frame results (see Table 21) similar to explanation presented in the Representative Sample section of Chapter V so it will not be duplicated here. An explanation of the internal consistency of the survey results (see Table 19) and the limits of the generalization were also presented so they will not be duplicated here.

The author of the 2004 RWTII needs assessment report in Utah suggested that the survey sample results can be generalized to the PLWH/A population in Utah and the

focus group results should not be generalized to the PLWH/A population in Utah. The focus group responses were subject to a high level of personal bias and opinion. The purpose of including focus groups in the design was to add context and to potentially help a reader understand trends observed in the survey data. The focus group responses represented the opinions of the individuals who presented them (UDOH, 2004b).

CHAPTER VI

DISCUSSION

Seven Elements of High Quality Needs Assessments

A summary of the seven elements of high quality needs assessments is presented in this section in an effort to identify one of the major contributions of this dissertation. Other major contributions are discussed in the next sections. The purpose of this section is to summarize the seven elements so they can be placed in a larger context in the next sections.

Evidence bearing on the first objective of this dissertation showed the value of emphasizing seven key elements in high quality needs assessments: (a) appropriate data collection methods, (b) representative sample, (c) reliability assessment, (d) validity assessment, (e) combination of qualitative and quantitative methods, (f) comprehensive assessment, and (g) methods that allow reasonable replication. The author does not imply rank or importance by the order in which the elements are presented. All elements contribute to the quality or accuracy of a needs assessment along with the sound professional judgment of the researcher. A brief summary of the seven elements is presented in the following paragraphs.

In the literature review, the author identified five criteria for selecting appropriate methods: (a) consider the characteristics of the target group, (b) consider the geographic area over which the population is spread, (c) consider the purpose of the study, (d) consider the application of the results, and (e) consider time, costs, and other restraints. These criteria were used to winnow the pool of methods that might be used in RWTII

needs assessments. Four methods were identified as the most appropriate: (a) archival research, (b) surveys/questionnaires, (c) group processes, and (d) interviews.

Literature pertaining to the representative sample element focused on achieving the goals of random selection. Random selection is a powerful selection tool that is the gold standard in achieving a representative sample. However, random selection is rarely feasible along all dimensions of interest. For example, one hundred percent of the RWTII needs assessments reviewed in Chapter II (see Table 7) did not use random selection due to the challenges this selection method presents in HIV/AIDS needs assessments. Evidence bearing on this paradox suggests that other selection methods can generate representative samples if they achieve the goals of random selection (Gall at al., 2003; Shadish et al., 2002). Proportional stratified convenience sampling and a sample frame are two tools presented as potential solutions to address this issue.

Classical Test Theory guided the discussion in the reliability assessment section where techniques such as internal consistency, test-retest reliability, alternate-form reliability, and other variants of these techniques were presented. Cronbach's α was identified as the best method for estimating the internal consistency of survey items that are expected to covary. The author concluded that the reliability of results from each data collection method should be reported and Cronbach's α should be used whenever necessary.

The discussion of the reliability assessment element naturally led to a discussion of the validity assessment element because reliability is a prerequisite for validity. Test validity was the framework for this discussion because this framework can be loosely applied to RWTII needs assessments. Face validity, criterion validity, construct validity,

and content validity were summarized in the validity assessment section, and the author recommended that the validity of the results from each data collection method should always be reported. Most methodologists do not hold face validity in high esteem, but most would agree that stakeholder involvement is an important thing. Face validity involves stakeholders as the reviewers of the test. Stakeholders casually review the test and make subjective judgments about the credibility of the test. It is important to note that the author uses the term "stakeholder involvement" throughout this dissertation to refer to the process of involving stakeholders in the face validity assessment.

The combination of qualitative and quantitative methods element is important in supporting the goal of validating results, particularly when the reliability and validity assessments are not conducted. The importance of the combination of qualitative and quantitative methods element depends not on the intrinsic value of multiple methods by itself, but on the contribution the element makes to reliability and validity. This element refers to utilizing a combination of methods from both qualitative and quantitative disciplines in an effort to capitalize on the strengths of each type of method and to enhance the accuracy of the results. Qualitative methods develop knowledge primarily through collecting verbal data through the intensive study of cases, and quantitative methods develop knowledge primarily through collecting numerical data from samples.

In the comprehensive assessment section, the author refined the scope of a RWTII needs assessment. HRSA stipulates that a comprehensive RWTII needs assessment should assess the health-related service needs among PLWH/A in the program's jurisdiction, including an assessment of the barriers that prevent PLWH/A from receiving services. Assessing the health-related service needs should encompass the full spectrum

of services offered to PLWH/A within the jurisdiction. A comprehensive list of health-related services would include broad categories such as: (a) primary medical care, (b) dental care, (c) vision care, (d) case management services, (e) housing services, (f) food services, and (g) other services such as mental health, substance abuse, and transportation.

The final element identified in this dissertation was the methods that allow reasonable replication element. The American Psychological Association (2001) suggests that the methodology section should provide sufficient detail so that a reader might reasonably replicate the study. The methodology section is critically important because it documents the steps a researcher takes to address the seven elements of a high quality needs assessment.

In summary, the seven elements of high quality needs assessments can serve as a guidance tool for planning groups conducting RWTII needs assessments. The seven elements can help guide planning committees in their needs assessment activities to potentially improve the quality of their needs assessment results. Another potential outcome is the development of an assessment tool for federal, state, or other funding agencies interested in assessing the quality of needs assessments submitted in grant applications. In the context of this dissertation, however, the primary purpose of identifying the seven elements was to establish criteria for a review of RWTII needs assessments. Results from that review are presented in the next section.

Review of RWTII Needs Assessments

The application of the seven elements as criteria in the review of RWTII needs assessments was the second major contribution of this dissertation. Evidence bearing on the second objective of this dissertation showed that a majority (n = 12; 92%) of the RWTII needs assessments in the sample could be improved (see Table 7). Four needs assessments received average quality grades and eight needs assessments received below average quality grades, which suggests they need improvement. As mentioned before, the purpose of the grades is to identify general patterns of strengths and weaknesses, as opposed to assigning definitive grades (see Table 6). The seven elements of high quality needs assessments served as the criteria for estimating the level of quality of the needs assessments in the sample.

A lack of reliability and validity estimates was the most common trend in the systematic review (see Table 7). All of the needs assessments used convenience sampling and only six needs assessments (46%) addressed at least two of the characteristics of the representative sample element. The lack of assessing the representative characteristics of the sample combined with a lack of reliability and validity estimates might bring into question the quality of the results from these needs assessments.

Quantitative surveys (n = 11; 85%) and focus groups (n = 8; 62%) were the most common methods for data collection. All of the needs assessments used at least one of the four methods identified as the most appropriate data collection methods for RWTII needs assessments (see Tables 2 through 4 for appropriate methods). None of the needs

assessments used a data collection method that was not identified as one of the top four methods for RWTII needs assessments.

A majority (n = 8; 62%) of the needs assessments used a combination of qualitative and quantitative methods. The popularity of quantitative methods was demonstrated by the 12 needs assessments (92%) that used quantitative methods. These results support the popularity of quantitative surveys (n = 11; 85%). Qualitative methods were still relatively popular with nine needs assessments (69%) implementing some kind of qualitative method.

Most of the sample (n = 8; 62%) did a good job at making sure their needs assessments were comprehensive. This might have improved if the RWTII programs would have done a better job documenting the variables that they measured. Only 31% (n = 4) of the needs assessments contained a subsection in their methodology section that described the variables that they measured. Many of the needs assessments had poor methodology sections with only four needs assessments (31%) describing the variables assessed and only four needs assessments (31%) describing the analyses used for the results.

In summary, the systematic review of RWTII needs assessments showed that many of the needs assessments in the sample can be improved. This has direct implications on the quality of the resource allocation decisions that were made or potentially might be made using these needs assessments as the basis of their decisions. Poor needs assessment data have the potential to have far-reaching detrimental effects on PLWH/A such as failure to receive primary medical care, life-extending drug treatments, or other important health-related services. Funding agencies might consider using the

seven elements of a high quality needs assessment to evaluate the quality of needs assessments submitted in grant applications in an effort to avoid the potential far-reaching detrimental effects of poor resource allocation decisions.

The Seven Elements and the 2004 Utah Needs Assessment

The application of the seven elements in a case example of improved practice was the third major contribution of this dissertation. This empirical contribution consisted of applying the seven elements in a recent RWTII needs assessment. Evidence bearing on the third objective of this dissertation showed that implementation of the seven elements has the potential to increase the quality of needs assessment results, or at a minimum, provide enough information for the reader to make a judgment pertaining to the quality of the results. The 2004 RWTII needs assessment in Utah served as a case example of improved practice to provide this evidence. This section summarizes the results and explains how each element was addressed in the case example of improved practice.

Comparing the 2004 and 2002 Needs Assessments

The 2004 RWTII needs assessment in Utah (B, 88%) was one quality grade higher than the 2002 RWTII needs assessment in Utah (C, 72%). This improvement was a result of the implementation of four characteristics, in addition to the characteristics addressed in the 2002 needs assessment: (1) Using focus groups, which is an appropriate data collection method; (2) assessing the reliability of results from the first data collection method; (3) stakeholder involvement; and (4) using qualitative methods. The three

changes in the 2004 needs assessment that accounted for addressing these characteristics were using focus groups, assessing the internal consistency of the survey results, and the creation of a needs assessment subcommittee.

The results presented above demonstrate how these three relatively simple changes from 2002 to 2004 improved the quality of this needs assessment in Utah. However, this effect would not be the same in every RWTII program. The degree of the effect would depend on the specific deficiencies of the preceding needs assessment, assuming that each additional needs assessment within a particular RWTII jurisdiction achieved the same level of quality of the preceding needs assessment. For example, if a RWTII program only addressed five of the 25 characteristics, then their quality grade would be a "D" (20%). If they adequately addressed ten characteristics during their next needs assessment, in addition to the original five, their quality grade would still be a "D" (60%). While the changes represent an improvement in the overall quality, failing to address a majority of the characteristics still presents a problem. RWTII needs assessments should address as many elements as possible to enhance the overall quality of the results.

Appropriate Data Collections Method Element

The 2004 RWTII needs assessment in Utah adequately addressed the characteristics of this element by using two of the top four data collection methods: (a) surveys, and (b) focus groups. Adding focus groups to the design of the 2004 needs assessment is one example of the improvements made since the 2002 needs assessment in

Utah. Adding focus groups to the design also contributed to addressing the "qualitative method" characteristic of the qualitative and quantitative methods element (see Table 20).

Including an additional appropriate data collection method would have been a potential improvement to the 2004 RWTII needs assessment in Utah. The author collected archival data under the scope of this dissertation in an effort to assess the contributions of this potential change (Archival data, 2004). Simply collecting archival data would have increased the quality grade of the 2004 needs assessment from a "B" (22 out of 25 characteristics addressed) to an "A" (23 out of 25 characteristics addressed) because archival research is an appropriate data collection method for RWTII needs assessments (see Table 3). This does not include the additional contributions the archival data might have had in the "reliability assessment" and "validity assessment" elements.

Representative Sample Element

All of the characteristics of the representative sample element were adequately addressed in the 2004 and 2002 RWTII needs assessments in Utah (see Table 20). In the 2004 needs assessment, deliberate actions were taken to achieve a representative sample by using proportional stratified convenience sampling and a sample frame. Similarities between the sample and the population were assessed throughout the study. Issues pertaining to the external validity of the results and the limits of generalization were also presented.

Reliability Assessment Element

The 2002 needs assessment did not include any reliability assessment, whereas the 2004 needs assessment assessed and reported the internal consistency of the survey

results. This change is another example of what accounted for the difference between the 2002 and 2004 needs assessments in Utah. The reliability of the focus group data was not assessed in the 2004 needs assessment, which suggests there is room for improvement.

One way to estimate the reliability of the focus group results is through the validity assessment. As mentioned before, results cannot be valid without being reliable, but they can be reliable without being valid. In some cases, if results have evidence of validity, then the researcher can assume the results are reliable because reliability is a prerequisite for validity. However, this method is simply an assumption, and it does not provide a definitive estimate of the reliability of the results. Estimating the reliability of the focus group results through a variant of the test-retest method (see Chapter II), or another method, would have been better than simply assuming the results are reliable.

Another way to build confidence in the reliability of RWTII needs assessment results is to examine results from past needs assessments. For example, the top five needs in the 2002 needs assessment survey sample were: (a) doctor visits for HIV/AIDS (83.9%), (b) CD4 count or viral load test (81.0%), (c) HIV/AIDS medications (66.3%), (d) information of treatment for HIV/AIDS (53.5%), and (e) help taking medications and dealing with side effects (44.7%). The top five needs in the 2004 needs assessment survey sample were: (a) doctor visits for HIV/AIDS (88.2%), (b) CD4 count or viral load test (84.9%), (c) HIV/AIDS medications (76.0%), (d) case management (70.4%), and (e) food vouchers (69.4%). Comparing the results between these two needs assessments is a rendering of the test-retest procedure. While the surveys are not parallel forms, looking at the results in a test-retest context might be helpful. However, the operational definition

of need was different in the two needs assessments, so statistical comparison between the two needs assessments was not completed. In the 2002 needs assessment, need was simply defined as need. In the 2004 needs assessment, need consisted of subcategories such as use, accessibility, satisfaction, and importance.

Validity Assessment Element

The 2004 RWTII needs assessment in Utah should have included a more explicit analysis of validity, or at a minimum, explained how the convergent evidence of construct validity was going to be presented throughout the report. While statements pertaining to convergent evidence of construct validity are beneficial, quantifying the relationship between the data sources might have proved more useful. The author correlated responses on certain constructs in the data sources (survey, focus groups, and archival data) to show how these analyses enhance our confidence in the validity of the results.

The survey data and the focus group data from the 2004 RWTII needs assessment in Utah were correlated on the HIV prevention service needs construct in an effort to provide convergent evidence of construct validity. The results from this correlation, $r_s(6) = 0.72$, $r_s^2 = 0.52$, $p = 0.052$, provide evidence that the results have good validity on this construct. While these correlation results provide evidence of validity, additional assessments of validity provide additional support for the validity of the results. The archival data proved to be particularly helpful in addressing this issue.

The survey data and the archival data from the 2004 RWTII needs assessment in Utah were correlated on the usage of services construct in an effort to provide additional

evidence of construct validity. The results from this correlation, r_s (12) = 0.80, r_s^2 = 0.64, p = 0.001, provide convergent evidence that the results have good validity on the usage of services construct. These results, in addition to the initial validity results, provide further credibility to the validity of the results.

Quantitative analyses of validity, such as those presented above, also help build confidence in qualitative assertions of validity. As mentioned before, the author of the 2004 RWTII needs assessment report in Utah included qualitative statements alluding to convergent evidence of construct validity throughout the results section of the report. For example, almost twice the number of survey participants (n = 50) identified methamphetamine as the drug of choice for sex under the influence as compared to the number who identified cocaine (n = 26). Similarly, a common theme in the focus groups was that methamphetamine was the most popular drug for sex under the influence (UDOH, 2004b). Examples similar to this one provide convergent evidence of construct validity although the evidence might be suspect as a stand-alone method for a validity assessment.

Combination of Qualitative and Quantitative Methods Element

Addressing this element is another example of what accounted for the difference in quality grades between the 2002 and 2004 needs assessments. The survey helped the RWTII program in Utah generate results that might be generalized to the entire PLWH/A population in Utah, and the focus groups provided a way to probe deeper and add context to the survey results. An example of the complementary relationship between the two data collection methods is presented in the following paragraph.

A key finding in the survey data was that PLWH/A in the sample did not feel like they needed HIV prevention services. The number of survey respondents that felt like they did not need HIV prevention services (n = 147) outnumbered all other responses pertaining to HIV prevention service needs combined (n = 112). The other responses to the HIV prevention service needs question included indications of need for condoms or lubrication (n = 40), financial assistance (n = 28), HIV prevention education (n = 23), mental health services (n = 16), and clean needles or bleach kits (n = 5). The focus groups provided a way to probe deeper for an explanation of the survey results. Focus group participants were quoted as saying "I don't really pay attention to (HIV) prevention anymore, because it's too late . . . The horse has already left the barn" and "I don't need (HIV) prevention services, the damage is done" (UDOH, 2004b, p. 21). Similar statements helped explain that PLWH/A in the focus groups felt that HIV prevention no longer applies once a person becomes HIV positive.

The benefits of using a combination of quantitative and qualitative methods were evident in the case example of improved practice. A combination of quantitative and qualitative methods has multiple virtues that assist a researcher in addressing multiple characteristics of the seven elements. One virtue is the contribution to the validity assessment element. As mentioned before, using a combination of methods allows a researcher to assess the validity of the results from each data source. Confidence in the validity assessment results is enhanced as additional methods are introduced. A combination of methods serves the purpose of triangulation as they provide convergent evidence supporting the validity of the results. As mentioned above, another virtue of using a combination of methods is that they provide depth and add context. Each method

in the case example of improved practice contributed to a comprehensive understanding of the constructs assessed in the study.

Comprehensive Assessment Element

HRSA stipulates that a comprehensive RWTII needs assessment should assess the health-related service needs among PLWH/A in the program's jurisdiction, including an assessment of the barriers that prevent PLWH/A from receiving services. The 2004 needs assessment survey was the primary data source for the health-related service needs, and the focus groups were the primary data source for the barriers that prevent PLWH/A from receiving services (UDOH, 2004b). The 2004 RWTII needs assessment in Utah adequately addressed the characteristics of the comprehensive assessment element and the results are summarized in Table 20.

Methods That Allow Reasonable Replication Element

The 2004 RWTII needs assessment in Utah adequately addressed all of the characteristics of the methods that allow reasonable replication element and the results are summarized in Table 20. Much of the evidence bearing on how well the 2004 needs assessment addressed this element has already been presented in Chapter IV. The evidence presented in Chapter IV describes the methods section of the 2004 RWTII needs assessment in Utah.

Limitations and Suggestions for Future Research

One of the limitations of this dissertation was the use of checklists in the systematic review of RWTII needs assessments. The checklists were not intended to

provide a definitive classification of the needs assessments in the review. While the author did provide a detailed description of how certain judgments were made, the judgments still represent the personal judgments of the author. The scoring systems and checklists were not assessed for reliability or validity, which might lead to speculation about the accuracy of the results. The author acknowledges these weaknesses and admits that there are a variety of ways a researcher could have reviewed the needs assessments. However, the purpose of the checklists was simply for heuristics. The author used the checklists to scan the available reports in an effort to identify patterns and to get a general sense of the quality of RWTII needs assessments.

Another limitation was the grading system used in the systematic review. The purpose of the grades was to identify general patterns of strengths and weaknesses, as opposed to assigning definitive grades. The grades also helped conserve space in Table 7. The purpose of the grades was simply for heuristics, and the author acknowledges that there are many ways a researcher could have approached this issue. For future research, a researcher might develop a more stringent rating or grading system.

The limited availability of RWTII needs assessment reports was another limitation in this dissertation. The author's conclusions about the current level of quality of RWTII needs assessments were limited to the current documentation available. An alternative explanation of the results observed in this dissertation is that RWTII programs are conducting high quality needs assessments but they are simply failing to adequately document the results. However, as noted, the author suspects that this is not the case based on conversations the author has had with RWTII program staff across the country (see Figure 1 for a list of references). Even if this were the case, a lack of documentation

makes it impossible for a funding agency to evaluate the level of quality of the range of results submitted. The author suggests that appropriate documentation guidelines based on the seven elements of high quality needs assessments should be established for RWTII grantees.

Suggestions for future research include an evaluation of the accuracy of resource allocation decisions. Evidence bearing on the second objective of this dissertation demonstrated that the current level of quality of RWTII needs assessments is poor. It would be valuable to assess the degree to which potentially poor needs assessment results have had an impact on resource allocation decisions. Planning committees will continue to allocate resources to PLWH/A populations within their jurisdictions regardless of the quality of the needs assessment data. The extent of the potentially poor resource allocation decisions has not been established.

Improving the checklists and replicating the review of RWTII needs assessments are other suggestions for future research. A researcher might improve on the approach taken in this dissertation by refining the checklists and assessing the reliability of the results. Follow-up interviews with RWTII programs across the country would also lend support to the reliability and validity of the results. Replication would enhance the validity of the results in this dissertation and enhance our understanding of the scope of the problem of poor needs assessments. It might be interesting to see if the low level of quality in needs assessments is unique to the Ryan White CARE Act or if needs assessments in other programs and other disciplines experience the same problem.

In summary, the results of this dissertation show that there are common elements in high quality needs assessments and the application of these elements has the potential

to improve the quality of the results. The author asserts that the seven elements of high quality needs assessments should be implemented in all RWTII needs assessments in an effort to promote best practices. The best practices might strengthen the ability to collect high quality needs assessment data, which in turn might improve the quality of resource allocation decisions. In addition, the seven elements hold promise and should be investigated in other domains.

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APPENDIX

September 23, 2004

Jennifer Brown, JD, MS
Acting Director, Bureau of Communicable Disease Control
Utah Department of Health
Box 142105
Salt Lake City, Utah 84114-2105

To Jennifer Brown:

I am preparing my dissertation in the Psychology Department at Utah State University. I hope to complete my degree in the Spring semester of 2005.

The datasets from the 2004 Utah HIV/AIDS Prevention and Care Needs Assessment, of which I was the lead researcher, report an essential part of my dissertation. I would like permission to use the de-identified datasets as part of my dissertation. Please note that Utah State University sends dissertations to Bell & Howell Dissertation Services to be made available for reproduction.

I will include an acknowledgment to the Utah Department of Health in the acknowledgment section of the dissertation and I will include acknowledgments to the datasets throughout the dissertation. If you would like a different acknowledgment, please so indicate.

Please indicate your approval of this request by signing in the space provided, and attach any other form necessary to confirm your permission.

If you have any questions, please call me at the number listed below or send an email message at the address below. Thank you for your assistance.

Ryan Loo, MS
Graduate Student, Utah State University
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Logan , UT 84322-2810
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rloo@utah.gov

I hereby give permission to Ryan Loo to use the de-identified datasets from the 2004 Utah HIV/AIDS Prevention and Care Needs Assessment in his dissertation, with the following acknowledgment:

Acknowledgment including full bibliographical information in the references section.

Signed: Jennifer Brown

Date: 9/24/04

State of Utah
Utah Department
of Health

Scott D. Williams, M.D., M.P.H.
Executive Director

A. Richard Melton, Dr. P.H.
Deputy Director

Allen Korhonen
Deputy Director

Charles D. Brokopp, Dr. P.H.
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EPIDEMIOLOGY AND
LABORATORY SERVICES

OLENE S. WALKER
Governor

GAYLE F. McKEACHNIE
Lieutenant Governor

September 23, 2004

Ryan Loo, MS
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2810 Old Main Hill
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Dear Mr. Loo,

I hereby give you permission to use the de-identified datasets from the 2004 Utah HIV/AIDS Prevention and Care Needs Assessment in your dissertation, with the following acknowledgment:

Acknowledgment including full bibliographical information in the references section.

The Utah Department of Health will provide the archival, focus group, and survey datasets to you, without any client/participant identifiers. I want to further emphasize the need for confidentiality of all information.

Sincerely,

Jennifer Brown

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Utah Needs Assessment Survey

Please answer each question to the best of your knowledge. **Your answers will not be shared with anyone**. Your completed survey will help us plan for and advocate HIV-related services in Utah.

Thank you for your help!

1. Do you have HIV or AIDS?
   - ☐ Yes
   - ☐ No, or "I don't know" **Stop here**. – Do not finish the survey.

2. Which best describes you?
   - ☐ Female
   - ☐ Male
   - ☐ Transgender

3. How old are you?_____

4. What is your zip code?_____

5. How long have you lived in Utah?
   - _____ ☐ months
   - ☐ years

6. Which best describes you?
   - ☐ American Indian or Alaska Native
   - ☐ Asian American or Pacific Islander
   - ☐ Black/African American
   - ☐ Hispanic or Latino
   - ☐ Multiracial
   - ☐ White/Caucasian
   - ☐ Other_____

7. What language(s) do you speak? (Check all that apply)
   - ☐ English
   - ☐ Spanish
   - ☐ Other_____

8. How comfortable are you receiving services in English?
   - ☐ Very comfortable
   - ☐ Somewhat comfortable
   - ☐ Not comfortable

9. In the past 12 months have you:

Owned a home?	☐ Yes	☐ No
Rented a home?	☐ Yes	☐ No
Lived in a hotel or motel?	☐ Yes	☐ No
Lived with friends or family?	☐ Yes	☐ No
Been in prison or jail?	☐ Yes	☐ No
Been homeless or lived in a shelter?	☐ Yes	☐ No
Lived in a half-way house?	☐ Yes	☐ No
Lived in a drug treatment center?	☐ Yes	☐ No

10. Are you currently in prison or jail?
    - ☐ Yes – If yes, for how long?
      _____
    - ☐ No

11. Do you have a partner, spouse, or significant other?
    - ☐ Yes
    - ☐ No

12. Do you have children who live with you at least some of the time?
    - ☐ No
    - ☐ Yes – If yes, what age groups?
      - ☐ Under 2
      - ☐ 2 to 12
      - ☐ 13 to 24

13. Which best describes you?
- ☐ Bisexual
- ☐ Heterosexual/Straight
- ☐ Homosexual/Gay/Lesbian
- ☐ Other

14. Do you have sex with men?
- ☐ Yes
- ☐ No

15. Are you an injecting drug user?
- ☐ Yes
- ☐ No

16. How did you get HIV?
- ☐ I don't know
- ☐ Having sex with a man
- ☐ Having sex with a woman
- ☐ Sharing needles
- ☐ Transfusion/blood products
- ☐ Perinatal – Mother to infant during birth
- ☐ Other_____

17. What year did you first test positive for HIV?

_____

18. Has your doctor told you that you have AIDS?
- ☐ Yes – What year?_____
- ☐ No

19. When you learned you were HIV positive, how soon did you get into medical care?
- ☐ Within 1 month
- ☐ Within 6 months
- ☐ Within a year
- ☐ More than a year
- ☐ I have not had medical care
- ☐ I'm not sure

20. Do you have one place you go for HIV medical care?
- ☐ Yes
- ☐ No

21. In the past 12 months, have you had any of the following? (Check all that apply)

CD4 count	☐ Yes ☐ No – If no, why not?_____	
Viral load test	☐ Yes ☐ No – If no, why not?_____	
Antiretroviral therapy	☐ Yes ☐ No – If no, why not?_____	

22. How do you pay for your medical care and medication? (Check all that apply)
- ☐ Medicaid
- ☐ Medicare
- ☐ Private health insurance
- ☐ State High Risk Insurance Program (HIP)
- ☐ Ryan White Program (including ADAP)
- ☐ Other_____
- ☐ I don't have health insurance of any kind

23. Have you ever skipped or stopped taking medication?
- ☐ Yes – Why?

_____
- ☐ No

24. Do you have a case manager who helps you get HIV-related services?
- ☐ Yes
- ☐ No – If no, why not?

_____
- ☐ I'm not sure

25. Is there someone else (other than a case manager) who helps you get services?
- ☐ Yes – If yes, who? _____
- ☐ No

26. How long has it been since you last saw your

case manager?

- ☐ I don't have a case manager
- ☐ Within the past month
- ☐ Within the past 6 months
- ☐ Within the past year
- ☐ More than a year – Why haven't you seen your case manager? _____

_____

27. What do you think would improve case management services?

28. Which best describes you? (Check all that apply)

- ☐ I work full time (40 hours a week)
- ☐ I work part time (less than 40 hours/week)
- ☐ I'm a student
- ☐ I'm retired
- ☐ I'm a volunteer
- ☐ I'm on disability
- ☐ I'm not working

29. How much money do you make, before taxes?

I make $_____

- ☐ per day
- ☐ per week
- ☐ per month
- ☐ per year

HIV Prevention Questions

The following questions help us prevent HIV. Your answers will not affect your ability to get services.

30. Have you ever used injecting drugs?

- ☐ Yes – If yes, when was the last time?

  _____
- ☐ No

31. Have you ever shared needles?

- ☐ Yes – If yes, when was the last time?

  _____
- ☐ No

32. How often do you have sex under the influence of drugs?

- ☐ Most of the time – Which drugs?

  _____
- ☐ Sometimes – Which drugs?

  _____
- ☐ Never

33. How often do you have sex under the influence of alcohol?

- ☐ Most of the time
- ☐ Sometimes
- ☐ Never

34. Have you ever been to a sex party?

- ☐ Yes – If yes, when was the last time?

  _____
- ☐ No

35. Have you ever been to a bathhouse?

- ☐ Yes – If yes, when was the last time?

  _____
- ☐ No

36. Where do you find your sexual partners?

37. What HIV prevention services do you need?

Use and Accessibility Questions

Directions: Please indicate whether or not you use the following HIV-related services, then rate how hard or how easy it is for you to get the service.

		Do you use this service?		Hard ←			Easy →		
				Very hard to get this service	**Hard** to get this service	**Somewhat hard** to get this service	**Somewhat easy** to get this service	**Easy** to get this service	**Very easy** to get this service
1.	Doctor visits for HIV/AIDS	❑ No ❑ Yes	→ Please rate →	1	2	3	4	5	6
2.	CD4 count or Viral Load Test	❑ No ❑ Yes	→ Please rate →	1	2	3	4	5	6
3.	HIV/AIDS medications (pharmacy, ADAP, etc.)	❑ No ❑ Yes	→ Please rate →	1	2	3	4	5	6
4.	Women's health (OBGYN, pregnancy testing, prenatal care, etc.)	❑ No ❑ Yes	→ Please rate →	1	2	3	4	5	6
5.	Child medical care (immunizations, well checks, sick care, etc.)	❑ No ❑ Yes	→ Please rate →	1	2	3	4	5	6
6.	Emergency medical care	❑ No ❑ Yes	→ Please rate →	1	2	3	4	5	6
7.	Medical care in your home	❑ No ❑ Yes	→ Please rate →	1	2	3	4	5	6
8.	In-patient/out-patient substance abuse treatment	❑ No ❑ Yes	→ Please rate →	1	2	3	4	5	6
9.	Alcohol or drug abuse detox	❑ No ❑ Yes	→ Please rate →	1	2	3	4	5	6
10.	Case management	❑ No ❑ Yes	→ Please rate →	1	2	3	4	5	6
11.	HIV/AIDS support group	❑ No ❑ Yes	→ Please rate →	1	2	3	4	5	6

12.	Psychiatrist visits/mental health counseling	❑ No ❑ Yes	→ Please rate →	1	2	3	4	5	6
13.	Vitamins, Ensure, Sustacal, etc.	❑ No ❑ Yes	→ Please rate →	1	2	3	4	5	6
14.	Food bank	❑ No ❑ Yes	→ Please rate →	1	2	3	4	5	6
15.	Food vouchers	❑ No ❑ Yes	→ Please rate →	1	2	3	4	5	6
16.	Nutrition counseling	❑ No ❑ Yes	→ Please rate →	1	2	3	4	5	6
17.	Transportation (bus, Trax, shuttle, taxi, van, etc.)	❑ No ❑ Yes	→ Please rate →	1	2	3	4	5	6
18.	Emergency financial assistance (utilities, rent, etc.)	❑ No ❑ Yes	→ Please rate →	1	2	3	4	5	6
19.	Help paying for health insurance (COBRA, HIP, co-pays, etc.)	❑ No ❑ Yes	→ Please rate →	1	2	3	4	5	6
20.	Information about treating HIV/AIDS	❑ No ❑ Yes	→ Please rate →	1	2	3	4	5	6
21.	Information about how HIV is spread	❑ No ❑ Yes	→ Please rate →	1	2	3	4	5	6
22.	Help taking HIV/AIDS medications and dealing with side effects	❑ No ❑ Yes	→ Please rate →	1	2	3	4	5	6
23.	Help with housing	❑ No ❑ Yes	→ Please rate →	1	2	3	4	5	6
24.	Legal assistance	❑ No ❑ Yes	→ Please rate →	1	2	3	4	5	6
25.	Dental care	❑ No ❑ Yes	→ Please rate →	1	2	3	4	5	6
26.	Vision services (eye exam, glasses, etc.)	❑ No ❑ Yes	→ Please rate →	1	2	3	4	5	6

Client Satisfaction Questions

Directions: Please rate how satisfied you are with the HIV-related services you get. If you don't get one of the services then skip to the next question.

		Dissatisfied			Satisfied		
		Very Dissatisfied	Dissatisfied	Somewhat Dissatisfied	Somewhat Satisfied	Satisfied	Very Satisfied
1.	Doctor visits for HIV/AIDS	1	2	3	4	5	6
2.	CD4 count or Viral Load Test	1	2	3	4	5	6
3.	HIV/AIDS medications (pharmacy, ADAP, etc.)	1	2	3	4	5	6
4.	Women's health (OBGYN, pregnancy testing, prenatal care, etc.)	1	2	3	4	5	6
5.	Child medical care (immunizations, well checks, sick care, etc.)	1	2	3	4	5	6
6.	Emergency medical care	1	2	3	4	5	6
7.	Medical care in your home	1	2	3	4	5	6
8.	In-patient/out-patient substance abuse treatment	1	2	3	4	5	6
9.	Alcohol or drug abuse detox	1	2	3	4	5	6
10.	Case management	1	2	3	4	5	6
11.	HIV/AIDS support group	1	2	3	4	5	6

12.	Psychiatrist visits/mental health counseling	1	2	3	4	5	6
13.	Vitamins, Ensure, Sustacal, etc.	1	2	3	4	5	6
14.	Food bank	1	2	3	4	5	6
15.	Food vouchers	1	2	3	4	5	6
16.	Nutrition counseling	1	2	3	4	5	6
17.	Transportation (bus, Trax, shuttle, taxi, van, etc.)	1	2	3	4	5	6
18.	Emergency financial assistance (utilities, rent, etc.)	1	2	3	4	5	6
19.	Help paying for health insurance (COBRA, HIP, co-pays, etc.)	1	2	3	4	5	6
20.	Information about treating HIV/AIDS	1	2	3	4	5	6
21.	Information about how HIV is spread	1	2	3	4	5	6
22.	Help taking HIV/AIDS medications and dealing with side effects	1	2	3	4	5	6
23.	Help with housing	1	2	3	4	5	6
24.	Legal assistance	1	2	3	4	5	6
25.	Dental care	1	2	3	4	5	6
26.	Vision services (eye exam, glasses, etc.)	1	2	3	4	5	6

Importance of Service Questions

Directions: Please rate how important the following services are to you.

		Not Important		Important			Very Important
1.	Doctor visits for HIV/AIDS	1	2	3	4	5	6
2.	CD4 count or Viral Load Test	1	2	3	4	5	6
3.	HIV/AIDS medications (pharmacy, ADAP, etc.)	1	2	3	4	5	6
4.	Women's health (OBGYN, pregnancy testing, prenatal care, etc.)	1	2	3	4	5	6
5.	Child medical care (immunizations, well checks, sick care, etc.)	1	2	3	4	5	6
6.	Emergency medical care	1	2	3	4	5	6
7.	Medical care in your home	1	2	3	4	5	6
8.	In-patient/out-patient substance abuse treatment	1	2	3	4	5	6
9.	Alcohol or drug abuse detox	1	2	3	4	5	6
10.	Case management	1	2	3	4	5	6
11.	HIV/AIDS support group	1	2	3	4	5	6
12.	Psychiatrist visits/mental health counseling	1	2	3	4	5	6

13.	Vitamins, Ensure, Sustacal, etc.	1	2	3	4	5	6
14.	Food bank	1	2	3	4	5	6
15.	Food vouchers	1	2	3	4	5	6
16.	Nutrition counseling	1	2	3	4	5	6
17.	Transportation (bus, Trax, shuttle, taxi, van, etc.)	1	2	3	4	5	6
18.	Emergency financial assistance (utilities, rent, etc.)	1	2	3	4	5	6
19.	Help paying for health insurance (COBRA, HIP, co-pays, etc.)	1	2	3	4	5	6
20.	Information about treating HIV/AIDS	1	2	3	4	5	6
21.	Information about how HIV is spread	1	2	3	4	5	6
22.	Help taking HIV/AIDS medications and dealing with side effects	1	2	3	4	5	6
23.	Help with housing	1	2	3	4	5	6
24.	Legal assistance	1	2	3	4	5	6
25.	Dental care	1	2	3	4	5	6
26.	Vision services (eye exam, glasses, etc.)	1	2	3	4	5	6

HIV Prevention Questions

Directions: Please answer the following questions as they relate to a regular partner(s), casual partner(s), and anonymous partner(s). Check the box marked "This doesn't apply to me" if the situation does not apply.

	With Regular Partner(s)	With Casual Partner(s)	With Anonymous Partner(s)
1. When I perform oral sex, I use protection . . .	❑ every time ❑ sometimes ❑ never ❑ This doesn't apply to me	❑ every time ❑ sometimes ❑ never ❑ This doesn't apply to me	❑ every time ❑ sometimes ❑ never ❑ This doesn't apply to me
2. When I receive oral sex, I use protection . . .	❑ every time ❑ sometimes ❑ never ❑ This doesn't apply to me	❑ every time ❑ sometimes ❑ never ❑ This doesn't apply to me	❑ every time ❑ sometimes ❑ never ❑ This doesn't apply to me
3. When I perform anal sex (I'm the inserting partner); I use protection . . .	❑ every time ❑ sometimes ❑ never ❑ This doesn't apply to me	❑ every time ❑ sometimes ❑ never ❑ This doesn't apply to me	❑ every time ❑ sometimes ❑ never ❑ This doesn't apply to me
4. When I receive anal sex (I'm the receiving partner); I use protection . . .	❑ every time ❑ sometimes ❑ never ❑ This doesn't apply to me	❑ every time ❑ sometimes ❑ never ❑ This doesn't apply to me	❑ every time ❑ sometimes ❑ never ❑ This doesn't apply to me
5. When I have vaginal sex, I use protection . . .	❑ every time ❑ sometimes ❑ never ❑ This doesn't apply to me	❑ every time ❑ sometimes ❑ never ❑ This doesn't apply to me	❑ every time ❑ sometimes ❑ never ❑ This doesn't apply to me

6.	Do you DISCLOSE your HIV status to your sexual partner(s)?	❑ every time ❑ sometimes ❑ never ❑ S/he already knows ❑ This doesn't apply to me	❑ every time ❑ sometimes ❑ never ❑ S/he already knows ❑ This doesn't apply to me	❑ every time ❑ sometimes ❑ never ❑ S/he already knows ❑ This doesn't apply to me
7.	Do you ASK the HIV status of your sexual partner(s)?	❑ every time ❑ sometimes ❑ never ❑ I already know ❑ This doesn't apply to me	❑ every time ❑ sometimes ❑ never ❑ I already know ❑ This doesn't apply to me	❑ every time ❑ sometimes ❑ never ❑ I already know ❑ This doesn't apply to me
8.	During the past 12 months, have you had unprotected sex with someone that has HIV or AIDS?	❑ Yes ❑ No ❑ I don't know	❑ Yes ❑ No ❑ I don't know	❑ Yes ❑ No ❑ I don't know
9.	During the past 12 months, have you had unprotected sex with an injecting drug user?	❑ Yes ❑ No ❑ I don't know	❑ Yes ❑ No ❑ I don't know	❑ Yes ❑ No ❑ I don't know

10. Have you ever <u>been paid</u> for sex?
(Check all that apply)

- ❑ No
- ❑ Yes, with money – If yes, when was the last time?_____
- ❑ Yes, with drugs – If yes, when was the last time?_____
- ❑ Yes, other:_____ – If yes, when was the last time?_____

11. Have you ever <u>paid</u> for sex?
(Check all that apply)

- ❑ No
- ❑ Yes, with money – If yes, when was the last time?_____
- ❑ Yes, with drugs – If yes, when was the last time?_____
- ❑ Yes, other:_____ – If yes, when was the last time?_____

THANK YOU FOR YOUR HELP!

To receive your $10 Smith's gift card,
please return the survey and the incentive card to the person who gave it to you or in the postage-paid envelope to:

NA Survey
Utah Department of Health
Bureau of Communicable Disease Control
Box 142105
Salt Lake City, UT 84114

CURRICULUM VITAE

Ryan K. Loo
(January 2005)

CAREER OBJECTIVE:

To obtain a position in an organization which requires expertise in research and evaluation. Special areas of interest: HIV/AIDS, public health, and social services.

EDUCATION:

Ph.D., Psychology. Utah State University (2005). Emphasis on research and evaluation methodology. Dissertation title: "Assessing the health-related service needs of people living with human immunodeficiency virus: A review of Ryan White Title II needs assessments." Dissertation Chair: Dr. George Julnes.

M.S., Psychology. Utah State University (2003). Emphasis on research and evaluation methodology. Thesis title: "Sampling considerations in human immunodeficiency virus and acquired immunodeficiency syndrome needs assessments." Thesis Chair: Dr. George Julnes.

B.S., Behavioral Science. Utah Valley State College (2001). Emphasis on psychology. Graduated with distinction.

ACADEMIC EXPERIENCE

2003: Adjunct Professor, Department of Psychology, Utah State University, Logan, UT; Course taught: Statistics for the behavioral sciences.

2002 - 2003: Graduate Teaching Assistantship, Department of Psychology, Utah State University, Logan, UT; Course taught: Statistics for the behavioral sciences.

2001 - 2002: Adjunct Professor, Department of Psychology, Utah Valley State College, Orem, UT; Courses taught: Statistics for the behavioral sciences, research methods, and instrument development.

2000 - 2001: Undergraduate Teaching Assistantship, Department of Psychology, Utah Valley State College, Orem, UT; Courses taught: Statistics for the behavioral sciences, research methods, and instrument development.

2000 - 2001: Statistics Lab Instructor, Department of Psychology, Utah Valley State College, Orem, UT. Taught students how to use SPSS and other spreadsheet based statistical software. Emphasis on interpretation of statistical results, report writing, and presentation of project findings.

PROFESSIONAL EXPERIENCE

September 2003 – present: Research Consultant/Coordinator, HIV Prevention Program and HIV/AIDS Treatment and Care Program, Utah Department of Health, Salt Lake City, UT. Responsible for the development, design, coordination, and oversight of all aspects of research and/or evaluation projects related to the prevention or treatment and care programs. Maintain expertise in CDC and HRSA policies and protocols as they relate to research and/or evaluation studies. Coordinate and oversee data entry, data analysis, instrument development/analysis, and interpretation of statistical results. Write reports, present project findings, and facilitate the use of research data to improve existing programs and utilization of resources.

2002 - 2003: Research Internship, HIV Prevention Program and HIV/AIDS Treatment and Care Program, Utah Department of Health, Salt Lake City, UT. Provided consultation services in research methodologies and data analysis. Wrote reports, presented project findings, and facilitated the use of research data to improve existing programs and utilization of resources.

PUBLICATIONS

Research reports where I was the first author:

Utah Department of Health. (2004b). *Utah HIV prevention and HIV/AIDS treatment and care needs assessment report.* Salt Lake City: Author.

Utah HIV Prevention Program. (2003). *2002 Utah HIV prevention needs assessment report: Consumer survey.* Salt Lake City, UT: Utah Department of Health.

Utah HIV Prevention Program. (2003). *2003 Utah HIV prevention needs assessment report: IDU survey.* Salt Lake City, UT: Utah Department of Health.

Utah HIV Prevention Program. (2003). *2003 Utah HIV prevention needs assessment report: MSM survey.* Salt Lake City, UT: Utah Department of Health.

Utah Department of Health. (2003). *2003 Utah HIV/AIDS unmet need and service gaps report.* Salt Lake City, UT: Author.

Utah Department of Health. (2002). *2002 Utah HIV/AIDS needs assessment report.* Salt Lake City: Author.

PRESENTATIONS AT NATIONAL CONFERENCES

Loo, R. (2004, August). *Institute for low incidence states: Basic quality management for little or no money.* Paper presented at the Ryan White CARE Act All Titles Meeting sponsored by the Health Resources and Services Administration, Washington, DC.

Loo, R. (2004, August). *Prevention for positives: Results from the 2004 Utah HIV/AIDS treatment, care, and prevention needs assessment.* Paper presented at the Ryan White CARE Act All Titles Meeting sponsored by the Health Resources and Services Administration, Washington, DC.

Loo, R. (2004, June). *Integrating prevention and care needs assessments in an effort to assess the prevention needs of people living with HIV/AIDS.* Poster presented at the annual HIV Prevention Leadership Summit sponsored by the National Minority AIDS Council and the Centers for Disease Control and Prevention, Atlanta, GA.

Loo, R. (2003, November). *Sampling considerations in HIV/AIDS needs assessments.* Expert lecture at the annual meeting of the American Evaluation Association, Reno, NV.